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OUTLINES

OF

PHILOSOPHICAL EDUCATION,

ILLUSTRATED BY THE

METHOD OF TEACHING

THE

LOGIC,

OR

First Class of Philosophy,

IN THE

UNIVERSITY OF GLASGOW.

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"Sicut aves ad volatum, equi ad cursum, ad sævitiam feræ gignuntur; ita nobis est agitatio atque sollertia, unde origo animi cœlestis creditur."

QUINCT. Lib. I. Cap. 1.

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PREFACE.

THE Author of the following Outlines has long been of opinion that Philosophical Education, as it is generally conducted in our Universities, is too much confined to the mere communication of knowledge; and that too little attention is bestowed on the formation of those intellectual habits of thinking, judging, reasoning, and communication, upon which the farther prosecution of science, and the business of active life, almost entirely depend. He is fully sensible of the genius, the knowledge, and the eloquence, which have been displayed in the public Lectures delivered to the Students by many Professors in our Universities,—some of whom, during the last century, have attained to the highest rank in their respective departments; but still he cannot help thinking that little or nothing has been done to generate, in the Student, that activity of mind, and that

facility of applying his intellectual powers, which ought to be the great object of all education.

The communication of knowledge is indeed necessary to furnish suitable materials for the exercise of the mental faculties; and, perhaps, with a few of the Students, whose minds are easily awakened to scientific pursuits, little else may be required. But this can only apply to a very small proportion indeed of those who enter upon a course of Philosophical Education; and, even with regard to them, nearly the same advantage may be derived from the judicious and systematic perusal of the writings of ancient and modern Philosophers.

It has been the object of the Author, who has been employed for more than forty years in the department of the First Philosophy Class in the University of Glasgow, to endeavour, as much as possible, to remedy this defect; and while he has, in the course of his public Lectures, explained to his Students the first principles of the Philosophy of the human mind, he has uniformly accompanied these Lectures with a system of active discipline on the part of his Students, with a view to create, invigorate, and improve, the important habits of inquiry and of communication.

These Outlines, accordingly, consist of Two Parts:—

The First exhibits a view of the Lectures which are delivered to the Students; in which the Author does not lay claim to the merit of any new discoveries in the science of mind, but has endeavoured to select those subjects which seemed most adapted for the employment of Youth, at the first commencement of their Philosophical Studies. With this view, he has not confined himself to the *Art of Logic*, or to any one department of knowledge, but has endeavoured to lay before his Students, in a simple and intelligible form, the elements of the science of mind, with an analysis of the different intellectual powers, in the order of their connexion and dependence,—the theory of language, as illustrative of human thought,—the principles of taste and criticism,—and the means of improving the powers of communication by speech and writing, as exhibited in the best models of ancient and modern composition.

The Second Part—which, to the Author, appears by far the most useful department of his labours—contains an account of the practical system of discipline to which the Students of this class are regularly subjected, for the purpose of acquiring habits of inquiry and of communication. This consists, *first*, of an account of the mode in which the daily examination of the Students is conducted; and, *secondly*, of the Themes and Exercises which are re-

gularly prescribed, and executed by the Students, and afterwards submitted to the criticism of the Professor. Neither in this part does the Author claim the merit of any new discovery; because the principles on which he proceeds have been long known and admitted: but he is not aware of any public seminary, where a system of practical exertion, on the part of the Students, has been enforced to such an extent as that to which he has endeavoured to carry it.

The Author was induced to publish these Outlines by the suggestion of some of his Pupils, who were pleased to express their conviction of the advantage which they derived from this mode of instruction; and also by the hope that, imperfect as they are, they may perhaps be the means of directing the attention of the public to the important subject of Academical Education. The long experience which he has had in the business of teaching, while it has made him fully aware of several defects in the general system of Academical Education, has emboldened him to speak of these defects with more freedom, perhaps, than he was entitled to use, considering the genius and ability of many of those who are entrusted with the instruction of Youth, in our public seminaries. But, as he has not been actuated by any desire of censuring particular individuals, or particular seminaries, he hopes that, in the strictures

which he has occasionally ventured to make upon the general objects of Education, it will not be supposed that he is insensible to the merits of our Academical establishments.

Of the style and manner in which this little Treatise is written, it would be unbecoming in the Author to say any thing, were he not afraid that the long habit of lecturing from notes to an audience, to whom frequent repetition and illustration was, in some degree, indispensable, may have imparted to his style a degree of diffuseness unsuitable to this species of composition. With the view, in some measure, of remedying this fault, of which he was perfectly sensible, the Author subjected the Manuscript to the critical inspection of some of his literary friends; and he must acknowledge the benefit which he has derived from their corrections and retrenchments. After all, however, some repetitions, and redundancies of style, he is aware, still remain; but as his chief aim is to be distinctly understood, and to explain, in simple terms, the Outline of that system of Education which he has pursued, he trusts he will be pardoned for a greater copiousness of illustration than may be necessary for the generality of Readers.

Of the great number of Pupils who have passed through the First Philosophy Class in the University of Glasgow,

during the last forty years, many are now advanced to high and respectable situations. It has been a great gratification to the Author of these Outlines, to look back upon the early indications of talent which they exhibited while under his care; and to understand, that not a few of them reflect with pleasure upon the occupations in which they were then engaged; and ascribe, in some degree, their advancement in knowledge, to the active and industrious habits, which it is the object of these Outlines to recommend and to enforce.

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ON THE COURSE

OF

PHILOSOPHY IN UNIVERSITIES.

Introduction.

The ancient division of Philosophy into Physics, Ethics, and Logic, probably suggested the order of teaching the different branches of it, which has long been followed in the Universities of Europe: and, in this arrangement, the first place was assigned to Logic; not only because it was regarded as a valuable acquisition in itself, but, more especially, because it was considered as an instrument of a peculiar kind, by the skilful application of which, all other knowledge, whether of body or of mind, was to be acquired.

The principal Universities in Europe, it is well known, were founded during the reign of the Scholastic Philosophy, which consisted of such a mixture of the doctrines and opinions of the

ancient Philosophers, as could be derived from corrupt copies, and imperfect translations, of their works, combined with the numerous Theological controversies which exercised the ingenuity, and employed the barbarous style, of the writers in the middle ages; and, as the chief object of education, at that time, was to qualify young men for the church, the motley system, which has just been described, was made the subject of study, in the schools of Cathedrals, of Monasteries, and other Religious houses.

Although, in the earlier ages of Christianity, the doctrines of Plato maintained a disputed authority with those of Aristotle, yet, upon the revival of learning in Europe, (more correct copies of the ancient authors having been previously discovered,) it was found that the works of the latter Philosopher had obtained an almost exclusive possession of the Schools; and this preference will not, perhaps, appear surprising, when it is recollected that the writings of this celebrated character embrace almost every subject of human knowledge or inquiry; Physics, Metaphysics, Ethics, Logic, Rhetoric, Natural History, Politics, and Criticism. On these various and interesting branches of Science he discovers, too, a greater degree of acuteness, combined with a sound and discriminating judgment, than any other of the Greek Philosophers; and his several treatises having been, at an early period, translated into Latin,

the technicalities of his system, his *forms*, *essences*, *entities*, *predicables*, and *categories*, became very soon incorporated with the whole mass of scholastic learning. His Analytics, for the reasons already mentioned, were held in particular esteem, and sedulously cultivated by all who aimed at academical distinction.

That Logic, at a particular period, and from particular circumstances, should have been cultivated more than any other art or science, is not perhaps very wonderful; but that it should have taken such hold of the minds of men as to preclude all other studies, and to constitute, in fact, the chief occupation and pleasure of the learned, is certainly a singular phenomenon in the history of Literature and of the human race. I shall, therefore, point out some of the causes and circumstances which are supposed to have originally led to this universal reception of Aristotle's Logic; as well as to the continuance of its authority, in certain College establishments in our own times, so long after the causes, now alluded to, have ceased to exist.

The ancient history of the Church informs us, that considerable differences of opinion, as to doctrine and ritual observances, subsisted even among the primitive Christians. In the beginning of the sixteenth century, however, when Letters had revived, and the Reformation had made some

progress, the topics of religious controversy were greatly multiplied: and, as these topics, at the era in question, were always more or less associated with speculations of a metaphysical nature, the addition thus made to the number of philosophical disputes, formerly agitated, not only opened a wider field for the exercises of the Dialectician, but suggested the expediency of paying more attention to the manner in which they might be carried on. The combatants on either side, accordingly, recurred with increased earnestness to the study of the Analytics of Aristotle; which, abounding in nice distinctions and definitions, in abstract notions, and general terms, supplied them with the means of maintaining an interminable disputation, without once entering into the merits of the subject upon which it turned: and thus the Controversialist, although incapable of securing a decisive victory, was never in danger of an irreparable defeat. As soon, therefore, as the utility of the Syllogism for this purpose was discovered, the knowledge of its form, and structure, of *predicables*, of *categories*, of *figure* and *mood*, and the ready application of that instrument, in every particular case, became the chief object of study in all seminaries of learning. The young Academic had no sooner entered his college, than he was taught to arrange all his notions in strict Logical order, and agreeably to the rules of art, for the purpose of Syllogistic exercises. *Theses* on controvertible subjects were regularly proposed; and the stu-

dents, having taken their sides, were encouraged by the masters to display their skill in the use of this intellectual weapon, and to call into action the various resources with which it supplied them, as well for defence as for attack. In process of time, the taste for this species of intellectual combat became very general. Disputations, no longer confined within the walls of Colleges, were frequently carried on in public assemblies, convened for the express purpose, and consisting of persons of the highest rank, whether in church or state. The greatness of the number of individuals who attended these public exhibitions would appear to us altogether incredible, did we not recollect that we are speaking of occurrences which took place before the invention of printing, when such occasions furnished the only opportunity which the learned enjoyed for displaying their knowledge and talents, or which fell to the lot of the uninstructed for receiving information on philosophical and religious subjects. Like the knights errant of Chivalry, too, or like the pugilists of our own days, the keener disputants of those times went from place to place in quest of adventures; challenging, every where, those who had obtained the highest reputation for learning, or for success in Syllogistic competitions.

The topics selected for those controversial disquisitions were naturally taken from the favourite studies of the age. A variety of abstract questions,

on different subjects of Philosophy, employed at that period the attention of monks and schoolmen, one of which questions was usually propounded for discussion: and, as the same views were constantly singled out for disputation, and, as the same points were repeatedly argued upon in their debates, the Logicians of every district, according to the opinions which they severally supported, were naturally arranged in different parties, and distinguished by different denominations. One of the most celebrated of these Philosophical controversies was that so long maintained between the *Nominalists* and *Realists;* and which, as every one knows, was carried on with so much violence and acrimony as actually to threaten the public peace, and on that account to call forth an edict from Louis II. of France, prohibiting all disputation on such inflammatory subjects. In short, the restless and vehement passions of mankind, which, in more recent periods, have found ample scope in political agitation and in religious controversies of a higher order, were usually found, during the times in question, to exhaust their strength and gratify their malignity, in such abstracted and frivolous discussions as those to which we have now alluded.

This literary phrenzy was still further increased by the distinction and rewards which were conferred upon those who, as expert Logicians, had signalized their zeal or ability in defence of the

church. The titles of Bachelor, Master, and Doctor, remunerated their first exertions in support of the Orthodox faith; whilst a long line of preferment, from the simple benefice to the Papal chair, was opened up to the more ambitious, to stimulate their ardour in repelling the attacks of heretics, and in upholding the authority of the ancient belief. There is good reason to conclude, that the defenders of the Catholic church derived much assistance from the philosophy of Aristotle, particularly from their dexterous use of the Syllogism. This opinion is strongly confirmed by the remarkable fact, that both Luther and Calvin exerted themselves to the utmost of their power, and with no small portion of acrimonious abuse, to disparage the Aristotelian doctrines, and even to fix the charge of Atheism and impiety upon their celebrated author.

From the operation of these causes, as well as for other reasons, of which it is unnecessary to give a minute detail, the philosophy of Aristotle, and particularly the doctrine of the Syllogism, had, even at a date considerably prior to the Reformation, been received with a degree of enthusiastic admiration, approaching almost to idolatry. There is, accordingly, no epithet of praise or of adulation which has not been lavishly bestowed on the talents of that writer; nor is there any object, in nature or in art, so exalted as not to have afforded to his admirers the ground of a com-

parison of it with his works, and even of a decided preference of those works to all created things. "The syllogism," it was said, "is the noblest and most useful invention ever discovered by man. It is the universal organ of Science; the eye of Intellect; and, like the Sun, the light of the world." Nay, one of the panegyrists of this intellectual instrument, a little more extravagant than the rest, not satisfied with comparing it to the Sun, boldly maintained its superiority to that glorious object!

"Utque supra Æthereos Sol aureus emicat ignes,
Sic artes inter prominet hæc Logica:
Quid? Logica superat Solem: Sol namque, diurno
Tempore, dat lucem, nocte sed hancce negat:
At Logicæ sidus numquam occidit; istud in ipsis
Tam tenebris splendet, quam redeunte die."

In like manner, the whole force of Antithesis and Alliteration was employed in illustrating and dignifying this favourite study. "Est, ergo, Ars Artium, Scientia Scientiarum, organum organorum, instrumentum instrumentorum, ancilla, clavis, testa, murus philosophiæ, docendi dicendique magistra, veri falsique disceptatrix et Judex." The encomiums, too, which were passed upon the Philosopher himself, rose to an equal height above decency and common sense. "If," exclaims one, "Aristotle, in his Natural Philosophy, spoke as a *man*, in his Morals and Metaphysics, he spoke as a *God*.—Que si, dans sa Physique, Aristote a

parlé en homme, dans sa morale, il a parlé en Dieu; qu' il y a sujet de douter si, dans ses morales, it tient plus du jurisconsulte que du Prêtre; plus de Prêtre que du Prophète; plus de Prophète que de Dieu!" *Le Pere Pardies.* "It is doubtful whether he did not discover more of the moralist than of the priest, more of the priest than of the prophet, more of the prophet than of the God." *Averrois*, too, one of the best as well as most devoted of his admirers, gravely tells us, "That Nature was not altogether complete till Aristotle was born; and, that, in him, she received the finishing stroke, and could not advance further." "Ac nemo cui cor sapiat, non satius esse ducet, in iis quæ ad philosophiam pertinent, cum Deo, ut ita dicam, philosophiam errare, quam cum aliis recte sapere, minorum gentium magistris." *Nicius Erythræus.*

Nor were this extravagant praise, and this boundless deference, confined to the mere scholar or professional commentator. On the contrary, the doctrines of Aristotle were very widely disseminated; and, what is more, were every where received with implicit confidence, even by the lowest ranks of society. Regarded, at length, as the surest guide to a sound faith, and as the best support of Christianity itself, the works of this author were, in some parts of Germany, actually read in the churches, and listened to by the people, with as much veneration as they were taught to feel for

the inspired writings. From this unnatural alliance between the philosophy of Aristotle and the cause of Revealed Religion, the authority of the former, as might have been expected, became every day more extensive and irresistible; until, in process of time, the weight attached to his name had so much influence, in suspending the rights of conscience and of private judgment, that it was accounted nothing short of heresy to dispute any of his opinions. *Ipse dixit; Magister dixit;* effectually silenced all discussion, and precluded all difference of sentiment, on religious or philosophical subjects. The effects of this blind admiration, in short, pervaded every department of Literature and Science; moulding the turn of thought, the structure of the argument, and the general form of reasoning. The prose compositions of the period in question, are accordingly full of cumbersome Technicalities, and of endless distinctions without any difference; whilst the works of Imagination are so deeply affected with the same spirit, as to present to the reader little else than versified metaphysics, or a personification of logical subtilties.

It was during this triumphant period of Aristotle's fame and authority, that the principal Academical establishments in Europe were founded; on which account, it is not very surprising that, in chalking out the plan of education in these institutions, the first place should have been given

to the Logic and Metaphysics of that author, as affording, agreeably to the received opinions of the times, the only certain means of acquiring useful knowledge: and, having once obtained this place in the academical arrangements, our ordinary views of human nature will enable us to explain why, in certain circumstances, they should have been permitted to retain their rank, as objects of human study, long after the causes to which they owed it had ceased to exist. It may not perhaps be so easy to account for the singular fact, that, even at the present day, the treatises just mentioned, are, in many seminaries of learning, allowed to hold an almost exclusive possession of the schools, during the principal part of the Academical course.

It might indeed have been expected, upon the revival of learning in Europe, and particularly after the publication of the NOVUM ORGANUM, which tended so greatly to shake the authority of Aristotle, that the unfitness of the Grecian Logic, for the purposes of a rational education, and especially for training the minds of youth to scientific pursuits, would have instantly become apparent. It is well known, however, that, long after this period, and at a time when the Baconian method of investigation had been successfully exemplified by Newton and Locke, who followed closely the footsteps of their great master, no change in the system of philosophical instruction

took place in any of the Universities of Europe. The following, among other causes, may perhaps have contributed to produce these effects.

The Greek philosophy, in general, had been received in Europe with great veneration. It came from Attica, the mother of Science, the land of Heroes, and the theatre of splendid achievements. From that little spot emanated the first rays of that precious light, which, with increasing splendour, continues to irradiate a great part of the habitable world. Nor was it only the Sciences and Arts, transported thence into the European states, which laid the foundation for that authority and reverence of which we are now investigating the cause; but the language itself, in which these precious deposits had been preserved and transmitted, by opening an immediate access to the valuable treasures of ancient Literature, acquired a firm hold of the mind, even among general scholars; and thus became, in a very short time, a necessary part of Academical education. During many centuries, too, after the first reception of the Greek Philosophy in the western parts of Europe, there was no other system of knowledge which could be put in competition with it: and it must accordingly be admitted, that, even with respect to Aristotle, the preference, which was so decidedly manifested for his works, did not proceed altogether from prejudice. It is but justice likewise to that great man to observe, that his *Analytics*, although by no

means entitled to the high praise of being the only standard whereby truth is to be distinguished from falsehood, and the sole introduction to all other parts of human knowledge, contain, nevertheless, many things of unquestionable and permanent utility. Among these may be mentioned his several rules, at once so clear and precise, for *distinction*, *definition*, and *division*, and which must ever constitute an essential part of every system of intellectual philosophy,—a portion of his work, of which succeeding writers have very freely availed themselves, without always acknowledging their particular obligations. The *Syllogism* itself, too, the great boast of ancient Logic, certainly exhibits the best analysis of a simple art of reasoning, which consists in the comparison of two things with a third: and, although miserably calculated for promoting invention, or for furthering the interests of science, yet, from the regularity of its structure, and from the precise and determinate nature of the rules upon which it proceeds, it may often be very happily applied to express Axiomatic truth, as well as to detect vague or inaccurate reasoning. Lord Bacon himself has, accordingly, admitted that the Dialectic method of teaching was *professorial* or *magisterial*, and favourable to an authoritative communication of undisputed knowledge.

But nothing, perhaps, contributed more to the continuance of the ancient Logic and Metaphysics, as a part of the Academical course in all our

Universities, than the practice of disputation already mentioned; which, whilst it formed an essential article among the things appointed to be taught in the schools, was universally regarded as the chief path to distinction and preferment among the more advanced students. Academical degrees could not be obtained without the candidates having previously published, and defended a Thesis according to the Aristotelian Dialectics, in the presence of the whole University. Candidates for Fellowships or Professorships were required to contend for these appointments in Syllogistic disputation. Bursaries or exhibitions were awarded on the same principle; and this mode of electing Professors, continued in the University of Glasgow, till near the beginning of the last century.

Among the causes which contributed to retain the Metaphysics and Logic of Aristotle in the course of Academical study, we ought also perhaps to regard the difficulty of substituting in their place any other system of instruction more efficient. The method of *induction* taught by Lord Bacon was chiefly applied by him to inquiries connected with Natural philosophy; which, in the age of that great Reformer, was esteemed, in a scientific point of view, greatly inferior in dignity and importance to the study of Mind. Besides, had any attempt been made, at that period, to extend the application of the inductive philosophy to mental Phenomena, there is

every reason to suspect, that the pride of ancient science would have refused to stoop to the humble method of proceeding, by observation and experiment. The lofty pretensions, the general principles, and the undefined but magnificent conceptions of the old school, would, in all probability, have maintained their ground, in opposition to the innovating spirit of the Novum Organum; which, as is well known, began by divesting the pompous teacher of nearly all his acquirements, and by impressing upon the mind of the pupil, that the use of his own senses and reflection were the only sure guides to knowledge. Be that as it may, nothing is more certain, than that established methods of teaching in Universities, from whatever cause they may have originated, very soon take a firm hold of the minds of both teachers and scholars; the former considering themselves bound to maintain the order and discipline to which they themselves had been subjected, and which they may have been long in the habit of enforcing; whilst the latter naturally contract a prejudice in favour of the system according to which they were instructed, of the persons who taught them, and even of the place in which they received their education.

The retirement of Academics, too, which, in former times, amounted almost to an entire seclusion from the world, by producing habits of a peculiar cast, rendered them indifferent to the opinions which floated around them, and altogether inattentive, of course, to the progressive improvements

of the times. The practice also, then general, of composing their lectures in Latin, and of *dictating* to the students in the same language, gave a mysterious semblance of learning, to every thing which they taught; and contributed not a little, we may suppose, to conceal from common observation, and even from the masters themselves, the intrinsic defects of the system which they continued to pursue. Perhaps, too, considerations of an inferior nature had more influence than would be readily acknowledged, in perpetuating, at a more recent period, the ancient discipline of the schools. New methods of teaching, particularly when directed to new subjects of study, necessarily require fresh efforts on the part of the teacher, new lectures, and new criticisms on books and systems; and, while teachers and pupils, from a natural indolence, willingly persuade themselves that their own methods are the best, their views are powerfully seconded, from without, by a numerous body of men, who deprecate any alteration whatever in established usages.

Thus, the causes which gave rise to the revival of Letters, and to the improvements of modern times, particularly in the science of human nature, were, every where, in constant operation, and had produced great changes in every department of life, long before they reached the Universities. Fortified by ancient Foundations, by ancient Statutes, and by ancient practice, these Institutions

persevered in their original plan; heedless of complaint, and undisturbed by the increasing objections which were now openly directed against their contracted views, and their still more imperfect methods, in teaching Philosophy. As civilization advanced, and as the intercourse among nations, resulting from Commerce, became gradually more extended, a new field of knowledge presented itself to the eye of the Philosopher, and new inducements were held out to the exertions of the ingenious and the enterprizing; and thus the defects of the prevailing system of education, and its total unfitness for the general purposes of life, became more strikingly apparent. But, although these defects were clearly pointed out, and although inventions and discoveries, arising from the improved method of philosophizing, were multiplied on every hand, yet neither example nor success had any influence on the learned in Universities, nor produced any alteration in their modes of teaching. "The improvements," says Doctor Smith, "which have been made in several different branches of Philosophy, have not, the greater part of them, been made in Universities, though some, no doubt, have. The greater part of Universities have not been very forward to adopt those improvements after they were made; and several of these learned societies have chosen, for a long time, to be the sanctuaries in which exploded systems, and obsolete prejudices, found shelter and protection, after

they had been hunted out of every corner of the world. In general, the richest and best endowed societies have been the slowest in adopting those improvements, and the most adverse to admit any considerable change in the established forms of education. Those improvements were more easily introduced into some of the poorer Universities, in which the Teachers, depending upon their reputation for the greatest part of their subsistence, were obliged to pay attention to the current opinions of the world."

ON THE CHANGE IN THE METHOD OF CONDUCTING THE FIRST CLASS OF PHILOSOPHY IN THE UNIVERSITY OF GLASGOW.

During the seventeenth century, various circumstances concurred to prove, both that the Aristotelian Philosophy was declining in reputation, and also that the Scholastic method of teaching it was felt to be no longer suitable to the spirit of the times. About 1646 or 1647, complaints upon this head had reached the General Assembly of the Church of Scotland; who, conceiving themselves to be invested with the right of superintending Universities, as well as inferior Schools, appointed Commissioners to examine into the practical details of their several modes of teaching, with powers to remedy abuses of every kind. In one of the Acts, accordingly, of these Commis-

sioners, it is declared, "that the dyting (dictating) of long notes have, in time past, proven not only a hinderance to the necessary studies, but also to the knowledge of the text itself, and to the examination of such things as are taught; it is therefore sincerely recommended by the Commissioners to the Dean and Faculty of Arts, that the Regents (the Professors who had the charge of educating the youth) spend not so much time in dyting of their notes; that no new lesson be taught till the former be examined; that every student have the text of Aristotle in Greek; and that the Regent first analyze the text, *viva voce*, and thereafter give the sum thereof in writing." We may also mention in passing, that it was likewise proposed to the Commissioners, by their Reverend Constituents, to introduce a uniform system of instruction into all the Scotch Universities; but this object, after much conference and discussion on the part of the Commissioners, and an actual comparison of the several plans of teaching then in use, was afterwards abandoned, as wholly impracticable, or at least clearly inexpedient, in the existing circumstances of the times.

A Royal Visitation, which took place in 1727, was the means of introducing, into the College of Glasgow, the first radical reform in the method of teaching Philosophy. Prior to this date, each Professor conducted his pupils through the whole philosophical course; giving lectures in three

successive years, on Logic, Ethics, and Physics: whereas, the principal change recommended on this occasion, by the Royal Visitors, consisted in restricting the Professors of Philosophy to one particular department. The former method was, no doubt, attended with some considerable advantages altogether peculiar to it; and, accordingly, it still remains questionable with many persons, fully competent to form a judgment on such matters, whether the innovation now stated, was, in every point of view, a decided improvement. When the primary object of a Professor is not so much to extend the bounds of science, by original speculations of his own, as to communicate to youth elementary instruction, drawn from the works of others, he will not find much difficulty in making himself sufficiently master of all that is necessary to be taught, in each department; whilst, from an intercourse with his students, during three sessions of College, he will have such an opportunity of becoming acquainted with their several talents and dispositions, as will enable him to adapt, with every prospect of success, his mode of instruction to their respective capacities. If, in addition to this, we could have any ground for assurance, that the duties of a Professor would always be discharged by the ablest men, and the best of teachers, there could be no hesitation in pronouncing the ancient system decidedly superior to the modern; but, when, on the contrary, it is morally certain that Professorial chairs will not always be filled by individuals so highly

qualified, and, as men of ordinary talents may, nevertheless, by confining their attention to one particular field of study, not only acquire some eminence, but become very successful instructors, it is extremely probable, all things considered, that every branch will be better taught by being put into the hands of a separate Professor. Besides, there is possibly some improvement to be derived from the opportunity, thus furnished to a young man, of observing and comparing different modes of communicating instruction; and, at all events, it will be reckoned an advantage, not entirely to be overlooked, that students should have it in their power to attend the lectures of any distinguished Professor, who, at any time, may happen to adorn our seats of learning.

The improvements in this University, arising from the regulations introduced, in consequence of the Royal Visitation, were greatly promoted by the appointment, which took place shortly after, of more than one Professor of singular zeal and ability.[19] The first of these was Dr. Francis Hutcheson. This celebrated Philosopher, whose mind was stored with the rarest gifts of learning, illustrated, with a copious and splendid eloquence, the amiable system of Morality which he taught, and which is still associated with his name; producing thus the happiest effects, not only on his own students, but also on his Colleagues in the other

chairs; and infusing, at once, a more liberal spirit, and a greater degree of industry, into all the departments of teaching. Great obstacles, however, still remained. The Professor of the first Philosophy class, according to the practice of the times, continued to deliver his lectures in the Latin language; a method of instruction, which, although it must long have proved a great bar to the ready communication of knowledge, on the part of the teacher, and to the reception of it on the part of the pupil, was not discontinued, in this College, till upon the following occasion.

In the year 1750, Dr. Adam Smith was appointed Professor of Logic here; and, being unexpectedly called to discharge the duties of that office, read to his pupils, in the English language, a course of lectures on Rhetoric and Belles Lettres, which he had formerly delivered in Edinburgh. It was only during one session, however, that Dr. Smith gave these lectures; for, at the end of it, he was elected Professor of Moral Philosophy; and it was on the occasion of this vacancy in the Logic chair, that Edmund Burke, whose genius led him afterwards to shine in a more exalted sphere, was thought of, by some of the Electors, as a proper person to fill it. He did not, however, actually come forward as a candidate; and the person who was appointed to succeed Dr. Smith, without introducing any change, as to the subjects formerly taught in the Logic Class, followed the ex-

ample of his illustrious predecessor, in giving his prelections in English.

Nothing, certainly, can more retard the progress of Science, and particularly of elegant literature, than the practice of teaching and writing in a foreign language. Imperious convictions of utility have now altogether removed that obstacle to improvement; yet, several years after the period now alluded to, when the Professor of Law in this University began to deliver his lectures in the English language, the Faculty of Advocates complained of this as an innovation, and requested that the former practice of prelecting in Latin might be resumed. At present, however, a total change of opinion on this subject has taken place; and, among no class of men, was it sooner or more decidedly manifested, than in the learned body of which we have just made mention; a great number of whom, almost immediately afterwards, repaired hither to study under the late celebrated Professor Millar, who delivered all his prelections in English.

This change in the mode of delivering lectures, which was soon extended to all the other classes, was obviously unfavourable to the practice of Scholastic disputation; and accordingly, from the time that the practice of lecturing in English began, the public disputations gradually declined. All the terms and expressions, employed in these

intellectual combats, were so closely associated with the use of the Latin language, that an attempt to dispute in our Vernacular tongue, according to the forms of the Aristotelian Logic, would not only have appeared extremely awkward, but, what is worse, would have infallibly exposed the inanity of the discussion. The last instance of a Degree in Arts obtained by defending a Thesis in the Public Hall of this University, occurred in the year 1762; the only vestiges of the practice being confined to the mode of conferring Medical degrees; and, even in this case, it is in the option of the candidate whether he shall defend a Thesis publicly or not. A strict examination in private, by a Committee of Professors, followed up by a public Examination before the *Senatus Academicus*, is esteemed a much more effectual method, for judging of the qualifications of Candidates, than any trial of skill in the use of Syllogistic Mood and Figure.

From the above period till the year 1774, when I had the honour of being elected Professor of Logic, the subjects prescribed by the Royal Commissioners continued to be taught in that Class in the following order.

The Class opened on 10th of October (the annual commencement of the Session, or Term), with reading and commenting on some portions of the Memorabilia of Socrates; which exercises con-

tinued two or three weeks, or until the greater part of the students were assembled. On the 1st of November, accordingly, the proper business of the course began, with an explanation of Aristotle's Logic, in the order of a short printed Synopsis. This subject occupied the attention of the class till about the beginning of February, when the Professor entered upon *Metaphysics*, commencing with that part which treats of the Human Mind; after which, about the middle of April, he proceeded to *Ontology*, or that branch of Metaphysical Science which comprehends the various doctrines on the general attributes of Being, Existence, Essence, Unity, Bonity, Truth, Relations, Modes of Possibility, Impossibility, Necessity, Contingency, and other similar abstract conceptions of pure intellect; which topics, together with the usual questions connected with them, relative to the Immateriality and Immortality of Mind, the Liberty or Necessity of human action, and other subordinate points, constituted the whole Course of study. The lectures were delivered to the students at an early hour in the morning; and, in the forenoon, the Students were again assembled, one hour every day, for the purpose of examination; in addition to which, two or three Themes, not very closely connected with the subjects discussed by the Professor in public, were usually prescribed by him as private exercises, at certain intervals during the session.

Having myself attended the Logic class in this University, I remember well the general impression which was made upon my mind by the lectures which were then annually delivered in it; and also the opinion which was entertained of them by the most intelligent students. The sentiment which universally prevailed among us was, That, though the Professor explained the subjects, of which he treated, with great perspicuity and distinctness, yet no useful or permanent effects could possibly result from his prelections, either in the way of promoting activity of mind, or of leading to sound Scientific principles. So far from affording any help or inducement to the study of Philosophy, the ancient Metaphysics appeared to us only to act the part of a *Cerberus*, in guarding the passage, and in deterring from every attempt to enter. Respect for the Teacher, rather than any interest in the subjects which he brought before them, induced the more industrious of the students to listen to the Lectures with patience, and with a decent degree of attention: yet, the well-known attainments of the Professor as a scholar, and the benign simplicity of manners by which he was distinguished, could not prevent his class from being emphatically, though rather rudely designated "*the drowsy shop of logic and metaphysics.*" The charm which had formerly created so much interest and attention, in relation to these subjects, was now completely dissolved. They were no longer subservient to the art

of Disputation, which, at an earlier period, was wont to inflame ambition, and invigorate industry, among youthful Academics; and almost the only motive which now remained, to secure attendance upon this part of the Course, was the title, thereby procured, of being admitted into the succeeding classes, and particularly into those which qualify candidates for the Church.

This conviction of the general uselessness, and even positively hurtful consequences, of spending six or seven months in the study of Logic and Metaphysics, was not confined to the youth within the walls of the College. From the time that the lectures began to be delivered in English, the eyes of men had been opened to the unsuitable nature of the subjects upon which they turned; and the defects of the System, as embracing a very important part of public Education, became every day more striking, and called more loudly for a radical reform. It was observed by those who interested themselves in this question, that the subjects introduced in the Logic class, even when perfectly understood, had little or no connexion with that species of knowledge which was necessary to prepare the student, either for the speculative pursuits of Science, or for the active business of life. The local situation, too, of this University, in the vicinity of a great commercial city, where a quick perception of utility, and a clear insight into the adaptation of means to ends, may be sup-

posed to predominate, gave frequent occasion to animadversions on our scheme of preparatory instruction. Intelligent persons, who sent their sons to the Logic class, although not themselves proficients in Literature, could not fail to observe, that the subjects to which their attention was directed, had no relation to any profession or employment whatever; that the discussions connected with them had no analogy to those trains of thinking which prevail in the ordinary intercourse of society; and, in short, that nothing could be derived from prelections on such topics, which was likely in the smallest degree, either to adorn conversation, or qualify the student for the concerns of active life. About this time, accordingly, some very severe strictures were published in Glasgow, the chief object of which was to impress upon the public at large, as well as upon those who were more immediately engaged in teaching, an idea that Universities adhered much too rigidly to the principles on which they were founded, and to the limited objects which they were meant to serve, in the ages of Scholastic ignorance and pedantry; when education was confined to a few bigotted Churchmen, for whose purposes it was almost exclusively calculated. "Some of the classes in Universities, bear evident marks," it was said, "of their original design; being, either totally, or in part, intended for the disputes and wranglings of Divines, and of little use to the Lawyer or Physician, and still less to

the merchant and the gentleman. Of this sort we reckon Logic and Metaphysics. These Arts or Sciences (for it is not agreed yet which of them they are) are, to the greatest part of students, quite unintelligible; and, if they could be understood, we cannot for our life discover their use." Even, before this period, Lord Shaftesbury, in his Characteristics, had given an opinion to the same effect. "Had," says he, "the craftiest men, for many ages together, been employed in finding out a method to confound Reason, and to degrade the understandings of men, they could not perhaps have succeeded better than by the establishing of this *mock science*."

During several sessions after my appointment, the former practice was regularly followed; that is, the usual course of Logic and Metaphysics was explained by me in the most intelligible manner I could—subjected, no doubt, to the same animadversions as my predecessor had met with. Though every day more and more convinced that something was wrong in the system of instruction pursued in this class;—that the subjects on which I lectured were not adapted to the age, the capacity, and the previous attainments of my pupils, I did not, however, think it expedient to make any sudden or precipitate change. Yet the daily examination of the students, at a separate hour, gave me an opportunity of observing that the greater number of them comprehended very little of the doctrines

explained; that a few only of superior abilities, or of more advanced years, could give any account of them at all; and that the greatest part of the young men remembered only a few peculiar phrases or Technical expressions, unaccompanied with any distinct notions of their meaning. Impressed with this conviction, which the experience of every day only tended to confirm, I found myself reduced to the alternative of prelecting, all my life, on subjects which no effort of mine could render either useful or interesting to my pupils, or of making a thorough and radical change, in the subject-matter of my Lectures themselves. In adopting the latter determination, I was influenced by several other considerations, though of subordinate import, in addition to those which have been just detailed.

About the period to which the above remarks apply, young men were sent to College at an age considerably earlier than formerly; and were consequently so much the more unqualified to enter upon the abstruse inquiries, connected with the Metaphysics and Ontology of the Schools. Besides, for the same reason, more time was now occupied with the study of Greek than had usually been devoted to that language, by students in the Logic class; and, as various employments, at home and abroad, which, at the period in question, began to open for our youth, drew them away from College at an earlier stage of life, their edu-

cation necessarily became less systematic, and considerably more abridged. Thus, the changes which were taking place in Society required a more miscellaneous and practical kind of instruction, in the first Philosophy class; for we found not only that our pupils, generally speaking, were younger, but that they had less time to spare for the abstract doctrines of ancient Metaphysics.

But the evil of persisting in the old system was not confined to the mere loss of a Session, and to the sacrifice of the useful knowledge which might otherwise have been acquired by the juvenile student. The effect was of a much more pernicious nature; for, to require the regular attendance of very young men, two hours every day, during a session of six or seven months, to listen to lectures which they could not understand, and in which, of course, they could take no interest, had a direct tendency to produce habits of negligence, indifference, and inattention; which, it is well known, terminate but too frequently in a positive and rooted aversion to study of every description. The transition, too, from their former studies, the animated perusal of the Greek and Roman classics, to the dry unfathomable depths of Logic and Metaphysics, was by far too abrupt. The knowledge of facts,—of the particular objects from which the abstract conceptions of the Metaphysician are drawn,—was still wanting. A transition so great and so sudden is, in truth, directly

opposed to the progress of natural culture, in the development of the human Faculties, as well as to the established modes of improving the understanding, and of communicating instruction, in every other department of knowledge. In what other Science or Art, it may be asked, are the more difficult parts made use of, as an introduction to those other parts which are more easily acquired and understood?

Another disadvantage connected with the ancient Logic and Metaphysics, as this study was formerly conducted in our Universities, arose from the circumstance, that, as it was wholly directed to the improvement of those particular Faculties which are employed in Acts of Reasoning, Comparison and Inference, it had an immediate tendency to produce an irregular and partial development of the mental Energies, and to disturb that due balance and connexion which is established among them by nature. It seems not to have occurred to the Scholastic philosopher, that the intellectual powers of man can only be successfully cultivated by a system of discipline which applies to the whole; for that, as these powers grow up together, in the closest connexion and affinity, so, in their progress towards perfection, they afford to one another an increased degree of strength and mutual assistance. The Faculty of Memory, for example, is improved by whatever tends to produce habits

of attention; and the Faculty of Combination and Inference is rendered more certain and vigorous in its operations, by the previous culture of those inferior powers of Intellect, whose office it is to observe, to define, and to arrange the materials of knowledge, than it could be done by any artificial rules, applied directly to that Faculty itself. The truth of these remarks is sufficiently illustrated by the effects which were actually produced, and by the distinguishing cast of character which prevailed, in the times under review. During the Scholastic ages, when the art of Logic was cultivated with unremitting and assiduous attention, the faculty of Reasoning was found to be improved only in one mode of application; while the powers of Taste, of Eloquence, and of Composition, were nearly altogether neglected, throughout the whole course of education, whether at School or College. And Mr. Stewart, in his Elements of Philosophy, has very satisfactorily shown, upon the authority of unquestionable facts, that men may become expert reasoners, with regard to a particular class of objects or ideas, without any general improvement of the faculty of Reason.

But the great object of a first Philosophy class should be to supply the means of Cultivation, not to one Faculty only, but, to a certain extent at least, to all the powers of Intellect and Taste; to call them severally into action; to present appropriate subjects for their exercise; to watch over

their movements, and direct their expanding energies; so as to maintain them in that just relation to each other, and to secure that reciprocal aid, in their progressive improvement, which seems pointed out to us by the order of nature itself. For Youth, destined to fill various and very different situations in life, the course of instruction ought not certainly to be limited to the narrow range of Logic and Metaphysics, but, on the contrary, should be made to comprehend the Elements of those other branches of Knowledge, upon which the investigation of Science, and the successful despatch of Business, are found chiefly to depend. Thus, we seldom find that those who are most celebrated, whether for Learning, or for Eloquence, or for skill in the practical business of life, avail themselves, on any momentous occasion, of the abstract reasonings of Logic, or of the subtleties of the Metaphysician; while, on the other hand, they are constantly observed both fortifying their Arguments and adorning their Language, with the knowledge which they have drawn from History, Morals, Jurisprudence, and Politics.

This part of the subject must not, however, be brought to a close, without remarking, that the objections which have now been made, do not so much apply to the art of Logic itself, as to the imprudent and very unseasonable introduction of it, as the principal business and field of study, into a first Philosophy class. After students have

made some progress in the science of Physics, and in the doctrines of Ethics; that is, after they have acquired some knowledge of Facts and Principles; this abstract mode of reasoning may occasionally be applied with considerable advantage; and, at all events, affords no unsuitable exercise to the mind. It should always be remembered, too, that the improper use which the Scholastic Philosophers, as well as some other teachers of more modern days, have made of the Dialectics of Aristotle, as an instrument for initiating young persons into their Philosophical studies, is by no means to be attributed to the Inventor of the Art. It never was his intention that his speculations should be employed for such a purpose. The absurdity in question is altogether attributable to later times; and the views have already been explained, which induced the patrons of Education, in the dark ages, to introduce these subjects into that particular part of the Academical course which they have so long occupied; and, being once fairly established, they have kept their place in spite of the progress of Science, the prevailing conviction of their utter inutility, and the ridicule which has been directed against those who have adhered, with such pertinacious bigotry, to the practice of their Ancestors.

ON THE SUBJECTS OF THE LECTURES WHICH HAVE BEEN SUBSTITUTED FOR THE ANCIENT LOGIC AND METAPHYSICS, IN THE FIRST CLASS OF PHILOSOPHY.

The system of instruction, now long established in the first class of Philosophy in this University, consists of two parts: the first, comprehending a course of lectures delivered daily, throughout the whole term, on such subjects as seem best suited to the Age, Habits, and actual Attainments of the students; the second comprising a daily examination of the young men, on the subjects discussed in the lectures, accompanied with prescribing, reading, and correcting a progressive course of Themes or Exercises, founded chiefly on the Lectures, and executed by every individual in the class. The details of this latter division of the business will be set forth, at considerable length, in a subsequent part of this volume.—I shall, therefore, at present, proceed to mention the subjects upon which the Lectures are composed; the sources whence they are drawn; and, in one word, the nature, the extent, and the particular character of that species of knowledge which is daily communicated to the students, as materials for thinking, and as the foundation of their further progress in Science or general Literature.

The term *Lecture*, it may be proper to remark, has a peculiar, and somewhat restricted, meaning

in the Scotch Universities. The common acceptation of this word is extremely loose and indefinite, extending to the explanation or illustration of obscure passages in ancient authors, and to general Criticism on their Beauties, or Defects; and, thus, the Tutor in an English College is said to give a Lecture, when, in translating the classics with his pupils, he occasionally removes difficulties, and points out, as he goes along, whatever may require their particular attention. But a Lecture, as applicable to the practice of the Scotch Universities, may be described as either an Analytic or Synthetic exposition of some literary or philosophical subject, drawn up in rather an expanded and popular form, and interspersed with copious illustrations, to assist the comprehension of the younger students. I here use the terms *analytic* and *synthetic* in their common, and not in their strict Geometrical meaning, as descriptive of the two different paths or tracks which the mind pursues, in the acquisition and communication of knowledge; that is, either when it collects particular facts, which lead to more general facts and principles, where such facts or principles can be obtained; or when, being in possession of general principles, it applies them to the explanation of such particular cases as may fall under them. In Academical Lectures, these two methods of investigation are sometimes separated, but much more frequently combined; according to the nature of the subject under discussion, and to the particular object which the Teacher may happen to have in view.

A Professor, accordingly, in composing Lectures to be delivered to young persons, must be supposed to have studied the several branches of knowledge which he teaches, with a reference to this particular end; to have selected and adapted every topic which he introduces into them, with a strict regard to the capacity, and previous acquirements, of his pupils, as well as to the precise point to which he proposes to conduct them, in their progress through Science. He must be supposed to have read and thought for his students, nearly as they might be imagined to read and think on the subjects which he is about to communicate to them; not, indeed, that he may thereby do their work for them, but that, on the contrary, he may occupy their time and their industry, with the most important, the most suitable, and, consequently, the most useful Studies. In the prosecution of these objects, it ought to be the aim of the teacher, in every part of his Lectures, to lay before his students, at the proper time, those particular Elements of Knowledge with which they ought to be first acquainted; to facilitate their progress towards more recondite subjects of enquiry; to prevent all unnecessary labour; to obviate all perplexity; to assist all their endeavours; and gradually to lead them into those paths which will guide them, with ease and certainty, to still higher degrees of Scientific Attainment. Such, I conceive, is the meaning of the word *Lecture*, in the Scotch Colleges. In addition, however, to what has now been stated, the Professor will occa-

sionally find it useful to comprehend, in his Elementary discourses, particularly when his subject naturally suggests them, such Literary incidents or anecdotes as may, at once, seem calculated to extend information, and to create a lively interest in the minds of the Students; for, in this way, he will render knowledge agreeable, from the manner in which it is conveyed, and highly efficient from the powerful motives which it can hardly fail to inspire.

It has been already shown that the Logic and Metaphysics of Aristotle do not furnish suitable materials for a course of Lectures in a first class of Philosophy; and it may be added, that Antiquity does not present to us any practical system whatever for initiating the youthful mind in the principles of Science, which, in these times at least, could be adopted, as the basis of an Academical course. Indeed, after the most candid and diligent survey which we can take of ancient Learning, whether among the Greeks, or among the nations from whom they are supposed to have derived their knowledge, we cannot discover that, with the single exception of Geometry, they possessed any Elementary treatise, or any work on Philosophical education, which would, in the smallest degree, answer our purpose. The Pythagorean system of discipline, for example, so far as we have the means of becoming acquainted with it, was far too speculative, either for acquiring knowledge or

for improving the Mental powers; and that Mystical Philosophy, which required of its disciples so many years of silent contemplation, would not be adapted to modern manners and pursuits, with any prospect of advantage. The Institutes of Persian education, mentioned with so much applause by XENOPHON, appear chiefly to have been directed to the improvement of the Bodily powers,—Activity, Dexterity, Muscular strength, and the Endurance of pain; and, accordingly, do not afford us much assistance, in constructing a system of rules and exercises for cultivating the endowments of the mind. From the *Memorabilia* of SOCRATES, indeed, and particularly from the works of PLATO, many valuable hints may be extracted for training youth to Reflection and Self-command; but, although, in this respect, these writings merit the closest attention, and even contain many fine specimens of that description of reasoning which applies most successfully to the affairs of Life, they certainly do not exhibit any regular System of Education, nor even the leading Principles upon which such a system could be formed. In like manner, though much was unquestionably done by the Philosophers of the Portico, the Academy, and the Gardens, in the way of communicating knowledge on many important subjects, still we are left almost entirely in the dark, as to the mode which these distinguished persons severally adopted, in their processes of instruction. Nor have we received from Roman Philosophy, even in its

most enlightened periods, any regular system of public or private Education. The Institutions of Quintilian, no doubt, although drawn up at a late period of that brilliant Era, which sheds so much lustre on the History of Rome, constitute one of the richest gifts which we have had bequeathed to us by former times; but, as they were originally calculated to assist young men, who were prosecuting the study of Law, they cannot be considered as possessing all the requisites of a general system of Academical culture. Much advantage may, however, be gained from that celebrated work, both by Teacher and Pupil; and, on this account, several portions are extracted, and printed, for the use of the Students in the Logic class here; to be occasionally read by them at the hour of Examination, and lectured upon, in the course of that reading, by the Professor; who makes it his business not only to explain the original views of the author, but to accommodate them to the circumstances of the present day, and to the particular object of his Course.

In modern times, numerous treatises have been written, both in our own and in foreign languages, on the subject of Education. No one of these works, however, able and judicious as some of them undoubtedly are, deserves to be implicitly followed as a guide, in a matter confessedly so important; for no one of them comprehends, in its details, the various Topics which ought to be intro-

duced in a first class of Philosophy, nor sets forth those still more essential duties of the Teacher, which consist in adapting his instructions to the opening capacity of his Pupils; in supplying them with constant and suitable employment; and in conducting them gradually from things more easy to things more difficult, in the natural order of the Sciences. The truth, indeed, seems to be, that a Systematic exposition of the different methods of teaching, considered merely as an art, rather than as a practical and progressive scheme, for directing the efforts of those who are just entering upon the Study of Philosophy, has occupied the attention, and exhausted the ingenuity, of the more eminent among the writers to whom I have now alluded. There appears to be still wanting a regular Elementary system of Academical study; which, uniting Speculation with Practice, Principles and Rules with suitable illustration and exercise, would embrace the means which seem best calculated to call forth and strengthen the intellectual powers of youth. It is of less moment, perhaps, from what branches of Science or of Art the materials of the Lectures, constituting such a system, should be drawn; provided they be carefully adapted to the actual state of information in which the Students, generally speaking, are found, at the commencement of the course, and agreeing in their tendency to create Habits of Diligence, and of independent Exertion. Were it, indeed, the main object of the Professor, in the

first class of Philosophy, to expound the doctrines of Logic, or of any other Art or Science, there can be no doubt that his Lectures ought to be restricted to that particular end; and the shortest and clearest explanation, which he could devise, would best serve his purpose. But, as that is only a very subordinate part of his aim, and, as his leading object is not so much to convey Information, as to stimulate Industry, and cultivate the natural abilities of his Pupils, he justly considers himself at liberty to make choice of his materials from the wide range of the Sciences and Arts, and as bound by no other rule, in the use of them, than that of making them all bear, more or less directly, upon the point which he wishes to accomplish.

Indeed, there is even a particular advantage gained by selecting the Materials of the Lectures, delivered in a first class of Philosophy, from different branches of the Sciences and Arts. The variety of subjects, thus introduced into the course, is more likely to attract the attention of young persons of different Dispositions, Talents, and Habits, than if the lectures were of a more Systematic and homogeneous character. Some may be captivated with the Philosophy of Mind, and others may feel a greater interest in the department of Taste, in the theory of Language, and in the rules of Criticism; and, when the command of attention is once secured, and habits of application once thoroughly formed, it is comparatively easy to transfer them

from one subject to another. Besides, how various soever the subjects may be, which constitute the ground-work of such Lectures, it is always understood that they should be connected, not only by the general aim of the Teacher, but by the relations which subsist among themselves; and, above all, that they should be so arranged as to conduct the Student, step by step, as well through the more limited field of knowledge with which he is to be made actually acquainted, as into the more extensive range which leads to greater attainments. The method of teaching by Geometrical Demonstration is, without doubt, the most perfect of all modes of communicating Science; and, in proportion as the principles of that method are adhered to, in constructing a scheme of Elementary education, so much more complete and successful will it be found in practice.

With regard to the Selection of materials here presented to the reader, as the subject of Lectures delivered in the Logic Class, at Glasgow, it is by no means pretended that it is the best, or the most appropriate, that could have been devised. Many valuable additions and changes might probably be suggested; and yet, imperfect and deficient as it may appear, it has been found by experience to answer at least some of the important purposes of a first course of Philosophical education. It is conducted upon Principles, too, which, combining Elementary Instruction with Active

Habits on the part of the Student, seem to be strongly recommended by the most intelligent Philosophers, both of Ancient and Modern times. "Neque est omnino," says Cicero, "ars ulla, in qua "omnia, quæ illa arte effici possunt, a Doctori tra-"dantur, sed qui primarum et certarum rerum ge-"nera ipsa dedicerunt, reliqua non incommode "per sequuntur." *De Oratore.*—"Quin ipsis docto-"ribus hoc esse curæ velim, ut teneras adhuc "mentes, more nutricum, mollius alant, et satiari "velut quodam jucundioris disciplinæ lacte pati-"antur." *Quinct.* lib. 2. cap. 4.—"The business "of Education," observes Mr. Locke, "is not, "as I think, to perfect the Learner in any of the "Sciences, but to give his mind that freedom and "disposition, and those Habits which may enable "him to attain every part of knowledge, himself." The views which I have of Education, and which I endeavour to put in practice in the first Philosophy Class, concur most perfectly with the sentiments, now expressed, of these great and enlightened minds.

It is somewhat difficult, in giving a *prospectus* of the business of the Logic Class, to draw the line between detailing too much and too little,—between a tedious explanation of common subjects, and a mere Skeleton of Contents. But it must ever be remembered, that these Essays were not written with the view of extending the Boundaries of those Sciences from which the Lectures

are taken: on the contrary, they are solely intended for the use of young men entering upon the Studies of a first Philosophy Class, and, possibly to afford some assistance, in the way of acquiring Knowledge, by their own exertions, to those who have not enjoyed the benefit of a Public Education.

ON THE SCIENCE OF THE HUMAN MIND.

After the objections which have been stated to the ancient Analytics and Metaphysics, as an introduction to the study of Philosophy, it may be thought a little inconsistent to adopt, as the subject of the first division of Lectures in the Logic Class, the very abstruse and difficult doctrines which respect the Science of Mind. If, indeed, it were proposed to engage the Students, upon this their first entrance into the threshold of Philosophy, in the Abstract Speculations which have been so long agitated by ingenious men, on the nature of Mind, generally considered; on its Essence, as separated from its various Properties; on the characteristic difference between Mind and Matter, as Metaphysical substances; or in any other of the innumerable questions which have been started, in relation to the reciprocal Action and Influence of these constituent parts of the Human being, the charge of Inconsistency would certainly be well founded. But none of these Speculations

form any part of this branch of the Lectures. The study of Mind, as well as that of Matter, has its plain and simple Elements; placed within the reach of those who are only beginning to acquire the Rudiments of Knowledge, and founded upon that acquaintance, which every one possesses, even in early life, with the operations of his own Faculties in the Perception and Discrimination of the objects which surround him.

In this Science, too, as in every other which proceeds upon regular Principles, the attention of the Student is confined at first to simple views, and particular facts; and it is only upon these, when properly ascertained and classified, that he afterwards advances, by successive and connected steps, to general Conclusions, or general Laws, with regard to the several Qualities and Operations of Mind.

To the Elements of this Science, therefore, I have recourse, on the present occasion, as the *Mother Science*, so to call it, from which all others derive at once their origin and nourishment. Thus, Logic, Metaphysics, Ethics, Jurisprudence, Law, and Eloquence, have their common origin in Mind; whilst, in all the branches of Natural Philosophy, the powers of Intellect are the instruments, by which Knowledge must be acquired. However much these Sciences may diverge from one an-

other, in their more advanced stages, and in the practical applications to which they lead, there can be no doubt that they are closely allied in their origin; that they have common Principles and a common Language; and, consequently, that an intimate acquaintance with the Phenomena of Mind must form a suitable introduction to the study of every branch of human knowledge.

The Mind of Man, then, when first presented to the inquiries of the Student, may be described as *that* which, in Human Beings, thinks, and feels, and wills, and is conscious of its Actions or Operations. But, as it is necessary that he should know his subject, not only as a whole, but as consisting of parts capable of Analysis, so far at least as to answer the purposes of a more minute examination, it becomes requisite that the several Faculties which manifest themselves in its different states of Thought and Feeling, should be placed before him, and separately explained, agreeably to some consistent Theory. The Powers or Faculties of the Human Mind, therefore, may perhaps be divided, and arranged, under the following heads; which division, although including more particulars than may be quite compatible with the Simplicity aimed at by some Modern Authors, seems to me, upon the whole, better calculated than a more restricted Analysis, to effect the object which I have in view.

1st, The Powers of acquiring and preserving Knowledge.

2d, The Powers of Sensation.

3d, The Powers of Volition.

4th, The Powers of Communication.

It is the first of these divisions to which the attention of the Students in this Class is particularly directed—to the powers of Perception, Reflection, Memory, Association, Imagination—to the processes of Abstraction, Generalization, Judging, and Reasoning. These Powers are classed together as having for their common Object the Acquisition of Knowledge; and they are named according to the particular office which each performs, in the complicated Mental Process by which that acquisition is made. Thus Perception is that particular Energy or Modification of Mind, by which Notions are acquired; Memory is that by which they are retained; and Judgment is that by which they are compared and discriminated: and, without this Division and Nomenclature, as applied to the Faculties of the Human Being, I see not how the study of Mind could possibly be carried on, or upon what ground it could be ranked amongst the Sciences. The Analysis, accordingly, which is instituted in this department of the Lectures, respects the several Modifications of Mental Power mentioned above—their Operations, their Offices and Objects—their Connection, and intimate Dependence upon one another.

In conducting this Process, it ought not to be regarded as a matter of indifference with what part, or quality of the subject, the Analysis begins. There is a certain order established by Nature which will prove the best guide to the young Philosopher, in following out his investigations; and to which, indeed, the Mind is inured by its earliest habits of inquiry, whether in the department of Art or of Physical Science. In examining a tree, for example, the Mind naturally passes from the trunk to the branches, the leaves, the flowers and the fruit; and, in the Analysis of a Watch, or Steam Engine, the process commences with the source of Motion, and advances, through a series of connected powers, till it arrives at the Result or ultimate Effect. Similar connexions or dependencies may be traced among the Faculties of the Human Mind; and, in this case, as in all others, the Student is most likely to attain success by a faithful adherence to those simple Rules, which are dictated by the natural Order and Connexion of the several parts of his subject.

It has, perhaps, arisen from the application of a defective Analysis, that Authors of Eminence, even in the present improved state of Philosophy, are found to use the various Terms, which denote the Faculties of the Human Mind, in meanings so extremely different. Ever since the time of Aristotle, Philosophers have attempted to found a Distinction of the Mental Powers upon the peculiar

nature of their several operations; and yet, so unsuccessful have all their endeavours, to effect this purpose, hitherto been, that Writers, at no distant period, have disputed whether Ideas were not a distinct Substance, *per se*, different both from the Faculty of Perception, and from the Object perceived. One Philosopher has maintained, too, that Perception and Judgment are precisely the same Faculty; and an eminent Modern Author of this country has attempted to identify the two important Faculties of Conception and Imagination. One class of writers, again, have described the Powers of Taste, and of Moral Approbation, as Internal Senses, innate and infallible; whilst others persist in considering them as nothing more than Modifications of Intellectual Energy, subject to the influences of Education, of Fashion, and Caprice. Surely, if the Analytical Investigations of Pneumatologists had been skillfully conducted, the Science of Mind, after the exertion of so much Talent and Industry, during nearly Three Thousand Years, would not be found incumbered with the numerous Imperfections and Deficiencies, which still adhere to it. The Astronomer has ascertained the true Principles of the Solar System, given names to the Stars, and traced the paths of Comets; but the Metaphysician has not yet succeeded in even defining the Limits of his Inquiries, or in opening up a path for his successors to tread in, by an intelligible Division of his Subject.

Some part of this want of success may, perhaps, be attributed to the Neglect or Contempt which has been manifested, particularly in our own days, for all researches connected with the Science of Mind; at least for that department of it which is called Pneumatology. We have been told, for instance, that the mere giving of Names to the Faculties of the Mind cannot serve any good purpose, nor make us better acquainted with these Faculties themselves. Will a person, it has been asked, perceive, remember, or reason better, by being informed that he has a distinct Faculty of Perception, another of Memory, and a third of Reason? It would be improper to answer these objections at any length, in this place; it will, therefore, be sufficient to observe, in passing, that the mere giving of Names, does not constitute the study of Mental operations; and, moreover, that it would be impossible to proceed one step, in the explanation of the most common Phenomena of Intellect, and Feeling, far less in employing the appropriate Means for Cultivating these original endowments, without previously distinguishing the several Powers of the Human Mind, by the application of suitable terms.

As these Essays are intended to point out the Manner in which the Faculties of the Mind may be explained, in a course of Lectures addressed to young men who have just entered a first class of Philosophy, I shall find it necessary to hazard an

Example of the Method which has long been pursued, for that purpose, in this University. It is not requisite, however, in such a Work as this, to give an exact Transcript of the Lectures which are actually read to the Students in the Logic Class; for, in the circumstances in which they are delivered, they necessarily comprehend many Illustrations and Repetitions, that would be thought insufferably tedious, by those to whom such subjects are familiar. The Reader will, therefore, be prepared to meet with a plainness and familiarity of address, not to be expected in Lectures composed for the Literary world, or even for Students of advanced years and acquirements.

I begin, then, by remarking that the particular Modification of Mental Power which is the subject of the Analysis now to be entered upon, is called PERCEPTION—that faculty, whose Office it is to open up the first Communication between Mind and Matter. In beginning the Analysis of each Mental Faculty, I have found it useful to present it to the minds of youth, by a general Description of its Object and Operations; and, afterwards, to direct their attention, successively, to the several Modes in which it puts forth its power, in different cases and circumstances: and, in particular, to conduct the Explanation, in such a Manner, as to appeal from the description of the Faculty, thus given, to the consciousness of my Pupils; and to refer

them, from the Theoretical view of its Operation, to the actual Feelings or Notions excited in their own minds.

According to this view "Perception is that "Power or Faculty of the Human Mind, by the "Operation of which we receive Notions, Ideas, "Sensations, from the Qualities of external ob-"jects, by the means of certain Impressions, or "Effects, upon the Organs of Sense, when the "Attention of the Mind accompanies the Direc-"tion of these Organs to the particular Object "before them."

I have here called Perception a Mental Power or Faculty. It is impossible to proceed one step in this Analysis, without leading the Student to form a Notion of Power,—or rather, putting him in the way of acquiring the only Notion of it which he can ever expect to attain. The first notion of Power, it is obvious, is derived from observing the Changes which are made, or the Effects which are produced, by one External Object upon another, as well as by these Objects upon the Mind through the Medium of the Senses. Thus, the Child long perceives these Effects, without acquiring any notion of Power distinct from the Object, itself, which operates the particular Change which it perceives; and it is not until the Mind has become a little more matured, and has been furnished with Experience, that the young observer learns to draw Inferences, and to form

general Conclusions. For those who are farther advanced, there is little difficulty in adapting such Illustrations as will enable the inquiring Mind to perceive the Connexion, or Relation which subsists between *cause* and *effect*. Suppose to be placed before them, a Needle at rest upon a Table, and a Magnet lying within a certain Distance of it; Motion instantly commences in the Needle ,and it rushes to the Magnet, in opposition to the laws of Gravity; here a Change is perceived; an Effect is produced; the two objects are conjoined. The Needle is again placed at rest upon the Table—the Magnet is removed, and a piece of common Stone is substituted—the Needle now remains at rest. A question then naturally occurs to the Student—what is it in the Magnet which produces the Motion of the Needle? It must be something which does not meet the Senses; it must be something which is not perceived; for it is neither in the Weight, nor in the Shape, nor in the Colour of the substance that this singular Energy resides. To that unperceived Property in the Magnet—to that unknown something—the term *power* is applied; and, when we speak of it, in relation to the Effect, we call it the *Cause* of the Motion which appeared in the Needle. By a similar Process, we arrive at a similar Conclusion with respect to the changes of Motion and Direction, in the several Members of the Body, arising from an act of Volition. We are conscious of an exercise of that Faculty, and we observe,

at the same instant, that a change, connected with the body, has taken place. We are likewise conscious of certain Acts of Volition directing the motions of the Mind; in all which cases, the Act of Volition and the corresponding change are conjoined so closely that they naturally force themselves upon our observation, and remain associated, ever after, in the particular relation of Cause and Effect. We observe the Change indeed—but we observe nothing more. We see a Fact, in particular Circumstances, resulting as a Consequent from an Antecedent; but, of the Cause, considered Metaphysically, we can form no Notion whatever. "Vis est notissima—Causa latet."

Nor is it at all singular that, while we are able to form clear and distinct Notions of an Effect, we should find it impossible to penetrate into the Nature and Mode of Operation of the Cause, from which that effect proceeds. We have a vivid perception, for instance, of the Effects which spring from the Union of Mind and Body, in the Human Constitution; and yet we cannot form the most distant conception of the Principle upon which that union is founded. Indeed, our purest and correctest Notions of Power are derived from Mind. A Billiard ball, for example, is at rest upon a Table:—a Mace is made to come in Contact with that ball, which is instantly put in Motion; and, in this case, although it is the Hand which moves the Mace, the Source of Mo-

tion is in the Mind, which, by an act of Volition, stretches forth the bodily Organ. By attending to these, and similar examples, the Student will be assisted in forming the Abstract Notion of *power*.

The terms Power and Faculty, as applied to Mind, it may be observed, have nearly the same radical meaning. The former, however, is of a more extensive import than the latter, and may be used in relation to Material as well as Mental objects. Thus, we say of a Stone that it has the Power, not the Faculty, of Gravitation; whilst, on the contrary, in reference to the Understanding and Volition of the Human mind, the term Faculty has a much more suitable application than the term Power. As a proper use of words is of the utmost consequence for preserving our notions clear and distinct, it may be farther observed, with regard to the Terms now under consideration, that there are in the Soul of Man certain Energies or Active Principles, to which neither the one nor the other will properly apply; and, accordingly, that, though we speak of the Faculty or Power of Memory, of Judgment, or of Reason, we do not employ such expressions as the Faculty of Desire, or, the Power of Hatred.

It is said above, that, by the Faculty of Perception, the mind acquires or receives Sensations, Ideas, Notions, &c. In going over with the Stu-

dent the several parts of this general Description, it naturally occurs to remark, that the Term *acquire* merely denotes a certain Operation by which the mind becomes possessed of something which it had not before; and that this and other Analogical expressions, are used in the explanation of Mental Phenomena, only from the imperfection of Language, and from the difficulty of substituting, in their place, any Forms of speech which would prove more definite and intelligible.

Beginning, then, with the first in order, SENSATIONS may be described as Effects, or Changes, of which we are conscious; and which are produced in the Mind by certain Impressions on the Bodily organs. According to Mr. LOCKE, all Changes of wh tever kind or degree, made upon the Mind, directly or indirectly, through the medium of the External Senses, are to be called Sensations; for, says he, "all our Ideas are either Ideas of Sensation or of Reflection." There is, however, an obvious distinction applicable to our Sensations, founded on the different degrees of Pleasure or of Pain with which they are accompanied, or rather, perhaps, in which they consist. The Odour of a Rose, for example, produces on the mind of the Percipient an effect so different from the Colour of a Board or the Coldness of an Iron Bar, that these sensations ought certainly to be discriminated, and classed under separate heads. In like manner, the sensations of Pain from the

Gout, are very different from the ordinary sensations of Touch; and so with regard to all the Senses, and their respective Objects. On this Topic, it is farther observed, that while Perception always implies a greater or smaller degree of Knowledge, in relation to the Subject upon which it is exercised, Sensation conveys no knowledge whatever of its Cause; being confined, in its intimations, to the different degrees of Intensity in which the various secondary qualities of Body may happen to subsist, in particular Substances.

The knowledge derived from Perception of the Material world around us, is expressed by the several terms of *ideas*, of *notions*, of *thoughts*, representative of certain Objects, with their Qualities and concomitants. The term Idea, coming from the Greek verb *ἰδεῖν*, properly signifies a Thought representative of such objects as have been perceived by the sense of Sight; and it is solely owing to the Poverty of Language that it is transferred to the first degrees of Knowledge, received by means of all the other Senses; and, farther still, to those Primary notions, or Elements of Abstract thought, which compose Trains of argument and Chains of reasoning, in the mind of the Philosopher or the Statesman. This Term, however, having been applied by certain writers to express the Conceptions which are formed of *genera* and *species*,—and having been restricted by others to signify that Image of External objects which was

supposed to be conveyed into the mind, during the process of Perception, and constituting a Specific Substance, distinct at once from the outward object which it represented, and from the Sensorium of the Percipient into which it was introduced,—the word *notion* has, in latter times, been very generally substituted in its place, as being originally of a wider import, and much more free from ambiguity.

Of the Qualities of External objects, made known by Perception, some are Secondary, and others are Primary; a distinction which is to be found in the works of Ancient Philosophers. The latter, it is well known, comprehend Solidity and Extension,—properties which were deemed essential to the existence of Matter, and inseparable from it: under the former are classed the more numerous attributes of Colour, Smell, Taste, Sound, Roughness, Smoothness, Heat and Cold. Were it not that every thing which can tend, even in the smallest degree, to Clearness of Conception, and to a proper use of Language, is important in the commencement of a Philosophical Education, it would not, perhaps, be deserving of remark, that, although we may apply the words *attribute*, *quality*, and *property*, almost indiscriminately to every Species or Class of objects, yet the first of these terms is more commonly used, when speaking of Dignified objects and persons. Thus, in reference to the Supreme Being, we employ the term *attributes*, and not *qualities*, or *properties*.

In the same simple mode of instruction, the attention of the Student is directed, when on the subject of Perception, to the important distinction established by Philosophers, between the Qualities and the Substance of External objects. A stone, to take a very familiar example, is hard, and heavy, and rough, and cold; and these are some of the *Qualities* of the stone; but the inquisitive youth will naturally ask, whether there be any thing in the stone, besides its qualities, incapable of Change, and essential to its Subsistence, as a Portion of Matter? The answer given to such inquiries will guide his mind in forming the Abstract Notion of *substance*. He will be told that there is, in the stone, something besides its Sensible Properties, and altogether different from them—the Basis or *substratum* upon which these properties rest—the Principle of Union by which these properties are combined and held together, and which, unlike them, can suffer neither Increase nor Diminution—being the Characteristic Arrangement of its Essence, so to speak, which forms the ground of distinction between a piece of Stone, of Metal, and of Wood. This principle of union, or substance, is not, itself, an object of perception; on the contrary, we *infer* its existence, by an Act of Reason, from the qualities which inhere in it, but we remain entirely ignorant of its Nature, when considered apart.

As to the *History* of Perception, or, as some

have expressed it, the *generation* of Ideas, it can only be remarked, that the Process commences with the Impression which is made by any external object upon the Organs of Sense;—those parts of the Human Body which are wonderfully fitted for opening a Communication between the Mind and the Material world in which it is placed. To each of these External organs is assigned its peculiar part in maintaining this communication; for they are all adapted to receive certain Impressions from the Qualities of Material objects, and to convey to the mind their respective Sensations of Sound, of Colour, of Smell, of Taste, of Hardness, Softness, Extension, Heat, Cold, &c.

That Sensations are produced by the impressions made upon the Senses by the Qualities of External objects, is a fact which admits not of doubt or controversy; but, as to the particular Nature of the change effected in the Organ, in the Nerves, or in the Brain, by the Secondary qualities of Matter, in the process which constitutes Sensation, we have no clearer knowledge than if we ourselves were not the subject of that Mysterious operation. We borrow the word *impression*, as is usual with the Pneumatologist in other cases, from the most familiar actions of ordinary life. A Seal is said to make an Impression upon melted Wax: a Hammer is said to make an impression upon heated Iron; and the effects of Colour

upon the Eye, or of Sound upon the Ear, were imagined to bear some analogy to the effect which one external object produces upon another. But the youthful Student is cautioned not to confound the Literal with the Analogical Acceptation of this Term; which, when applied to Mind, carries a meaning totally different from a change in the Collocation of Parts, or a new Arrangement of Surface. Though both the organ of sense, and the external object corresponding to it, be strictly Material, no effect of a Sensible or Physical nature is produced upon the former in the Act of perception: and a thousand succeeding impressions may be made upon the same organ, without altering its Anatomical structure, or leaving any traces of the Archetype of any one of the countless ideas which have been thereby formed. The term Impression, therefore, in the department of Mental Science, merely denotes an unknown Effect; which Effect, however, is absolutely essential to the grand result—the Perception of objects and the Formation of thought.

In our endeavours to comprehend the Mode in which impressions are produced on the organs of sense, particularly on those of Touch and of Taste, we are stopped short at the very first step; whilst, from our more intimate knowledge of the organic Structure of the Eye and Ear, as well as of certain properties of Light and Sound, we are enabled to proceed at least one step

farther. The Science of Optics informs us that the Rays of Light, in passing from an object to the eye, are subjected to Reflection and Refraction, in such a manner, that, when they reach the Retina, or back part of that organ, a Picture in Miniature of the object whence they proceed, is therein completely formed; somewhat in the same way as Reflected Rays are concentrated in a Concave Mirror. Still, although we can trace the process of Perception thus far, we continue as much in the dark as ever, with regard to the Nature of the Connexion, and the precise point of union, between Matter and Mind. We cannot even assign any reason why the Faculty of Perception, in the case of Visible objects, should require the intervention of an Optical Image; while, with respect to all the other senses, the mind perceives, immediately and directly, whenever the several organs are addressed by their appropriate Attributes in the Material world. That the presence of an external object is indispensable, both to the Existence of Sensation, and to the Conception of the mind, in forming the Elements of Thought, is a point clearly ascertained; but beyond this we cannot advance: an impenetrable Veil is drawn over the wonders that follow, which, in our present state of being, we shall never be able to remove. There is no ground, however, to be surprised that we should encounter such an obstacle in our search after Causes, when approaching the farthest boundaries which divide Matter from

Mind; it is only requisite, in communicating Elementary instruction to Youth, to draw as exact a line as possible between the known and the unknown; between what is certain and what is only probable.

In conducting this Analysis of Perception, nothing should be omitted that may tend, in any degree, to awaken Curiosity, to excite Interest, and to confirm habits of Attention and Inquiry, in the minds of Youth. At this stage, the zealous Student, who has now, perhaps for the first time, been informed of some of the Facts just mentioned, relative to the Senses, will, in all probability, be disposed to prosecute his inquiries still farther, with regard to the interesting Organ of Sight. Why is it, he will ask, that the Visible object is perceived *erect*; whilst the Picture of that object, in the eye, is *inverted?* and how does it happen that we see only one Object, there being a distinct Image formed in each Retina? Upon what Principle is the fact explained, that the mind measures distance by the Eye, although distance is not an object of sight; and in what manner do the senses of Sight and of Touch afford assistance, and occasion improvement, the one to the other? These questions, indeed, cannot be satisfactorily answered; but the Investigations and Reasonings, to which they lead, will prove highly advantageous to the young Philosopher. He will find that the curious Facts, which stimulate his

research, must be traced back to that early Education which is conducted, not by the skill of a Professor, but by the wisdom of that great Teacher who put a Spirit in man, and taught him more than the beasts of the field and the fowls of heaven. He will discover that the most valuable part of our Education is begun at an earlier date than we are ready to imagine; and that, whilst, according to our hasty conclusions, children are acquiring nothing, they are, in fact, busily employed in the Acquisition of those important Habits, on which all future Instruction is founded, and which could not be so successfully formed at any after period.

To the general account which has now been given of the Faculty of Perception, is subjoined, in the Lectures, a separate Explanation of each of the external Senses—or rather—of the different Modifications of Perception which are connected with the Functions of the different Senses. In this detail, an attempt is made to characterize these modifications, by stating the Source whence they are derived, the Objects to which they bear a Reference, and the external organs through which the respective Sensations are conveyed. The attention of the Student is directed first to the Material process in Sensation, so far as that process can be traced; then, to the sensation itself, as an object of the Mind's consciousness; and lastly, to the Comparison and Determination in-

stituted by the Judgment, by which the Sensation is raised to the rank of an Idea, or Notion, or Thought, and becomes a complete Perception. This Analysis, too, is concluded with an attempt to lead, by easy steps, the minds of the Youth to the Solution of two Questions connected with the external Senses, and deeply involved in Metaphysical perplexity;—first, whether the Senses ever deceive us,—and, secondly, whether there be any other proof of the Externality of the objects of Sense, than that intuitive Belief which accompanies the Act of Perception?

After the external Senses, I proceed, in a similar manner, to the explanation of the other powers of Knowledge,—viz. Attention, Reflection, Consciousness, Memory, Imagination, Association; advancing, in due order, to the Analysis of the more complex processes of Abstraction, Generalization, Judging, Reasoning, and Invention. The principal object, and one which is constantly kept in view, in the Lectures on these Faculties, is to distinguish them from one another, by pointing out their respective Operations and Offices—to state their mutual Connexion and Dependance—and to illustrate the manner in which they assist and invigorate one another. To render this Elementary instruction more efficacious and intelligible, the Student is invited to cultivate an intimate acquaintance with his own mind; to institute a Comparison between the Explanation of

every Faculty, as given in the Lectures, and the actual Operations of it, as recorded by his own consciousness, when directed to its proper object: and, above all, to form Clear Notions, and to use a well defined Language, in his reasonings, and discussions, on the several subjects which constitute the Basis of Mental Philosophy.

Such an Analysis of the Powers of the Mind as has now been described, comprehending the appropriate operations of the Intellectual Powers, in their simple or combined processes—the Generation and Formation of Ideas—the manner of Expressing them—the modes of Combination and Deduction, is the only proper foundation of Rules for Conducting the Mind in the search of Knowledge, or of Communicating it clearly and distinctly to others. The frequent and constant complaints of a Defective Logic have chiefly arisen from the want of sufficient Knowledge of the Principles on which such Rules are established.

I conclude this head with observing, that such Exercises of Mental Powers as these Lectures encourage and require—while they tend to instruct, and to increase our Knowledge, leave their traces behind, in strengthening and confirming the Habits which bear on the Powers of acquiring and communicating Knowledge. They serve this purpose much more effectually than Rules or Precepts directly prescribed for the improvement of them.

ON THE ORIGIN AND PROGRESS OF LANGUAGE, AND THE PRINCIPLES OF GENERAL GRAMMAR.

These Subjects constitute the Materials of the second division of Lectures read in the first Class of Philosophy; and no Inquiry, certainly, regarded as a medium through which to study the Powers of Mind, can be more suitable than that which respects the Origin and Structure of those External Signs which are used to denote the various operations of the Mental Faculties with which it is our object to become acquainted. No subject can be more closely connected with another than Notions and Sensations are with the external signs which represent them:—the latter yield a sensible Representation of the former. In the former division of the Lectures, the attention of the Student was directed immediately to the Intellectual Faculties themselves, and their several Offices and Relations; but, as he must have found it extremely difficult to form a just Conception of their Nature from a mere Description of their Object, or even to keep his attention alive to a detail of Mental processess, abstractedly considered, he is furnished, in the present Section, with the means of knowing these Faculties, and their respective Modes of operation, from seeing them represented, by external Symbols, in the Formation and Uses of Language. Independently of the advantage now stated, there is, perhaps, no other subject at once so easily ac-

commodated to the Understandings of the young, and so closely connected with every other branch of Science and of Art, as the study of Language and General Grammar.

The difficulty of forming a System of Artificial Signs, whereby men might communicate to one another their various thoughts and feelings, has appeared to some Philosophers so very great, as to exceed the utmost efforts of Human Ingenuity. They have, accordingly, ascribed the Origin of Language to the immediate interposition of Heaven; and, endeavouring to support this opinion by the authority of Divine Revelation, they remind us that Adam gave names to the numerous tribes of animals which were made to pass before him in the Garden of Eden. But this Inspired Language, it may be observed, in reply, must have been solely adapted to the limited circumstances, in which the First Man was placed; and could not exceed, in the amount of its Terms, the number of objects to which Names were to be given. Indeed, an Unwritten Language must necessarily be restricted, in point of copiousness, to the few words, whether denoting Things, or the Relations of things, which may be necessary to express the simple Conceptions of the people who employ it; and, whatever might have been the nature and extent of the original language now alluded to, we know that, at a future period, owing to the wickedness and presumption of mankind, it was

entirely lost; and that, consequently, the Human Being was reduced to the necessity of inventing, anew, the art of Communication, upon the strength of that Sagacity and of those Resources, which were originally furnished to him, in the Constitution of his Nature. Thus, it should seem, that the power of Forming Language, like the Faculty of Reason, and those other Endowments which are engrafted upon our Mental Frame, was committed to the industry of man to bring it into Use, and adapt it to his purpose, according as his knowledge of the things around him became more extended and refined. And, in the wide field of human Discoveries and Improvement, there is not, perhaps, one Invention which affords a stronger proof of the natural Ingenuity of our Race: for the art of embodying their Thoughts and Feelings, in Sensible Signs, must have made considerable progress, at a very early period, and before the use of other arts could have adorned the intercourse of Society.

In his rudest and most uncultivated state, the Language of Man is of the same kind with that of the Inferior Animals; differing only in the greater degree of perfection which arises from the higher and more noble Faculties possessed by the former: and, on this account, the Collection of Signs, audible and visible, by means of which Communication is then carried on, is denominated Natural Language—being those particular Manifestations

of Want, of Desire, or of Intention, which man is prompted, by the constitution of his nature, to make, and also to understand when made by others. In attempting, however, to trace the progress of this wonderful Art, we are necessarily unprovided with any regular History of its origin, and of the Steps by which it advanced, as the Invention of Writing was long posterior to the use of Articulate Sounds; and also because great advancement must have been made in it, before the attention of Mankind could be directed to an Analysis of those particular Workings of their Minds, upon which the origin and structure of Speech are found chiefly to depend. Nor can any assistance in our Researches, be derived from examining into the Formation even of such Languages as appear the most Original. Their Analogies are too perfect, and their general structure too complete, to serve the purpose of leading us back to those First Essays, and Rude Beginnings, of Verbal Intercourse; when men spake from their Feelings rather than from their Reason, and gave utterance to Ardent Emotion rather than to Profound Reflection. We are left, therefore, in this research, to note the various Resources which Necessity would create, in the first instance, and afterwards to guide our opinions by the knowledge which we possess of the Laws of Association, according as that powerful principle would modify the exertions of the Human mind in the Formation of an Artificial and Conventional Language.

The Student will best form a notion of the Manner in which men communicate by Natural Signs, by supposing two Solitary Savages to meet together for the First Time. After mutual surprise, they would perceive their Likeness, in many respects, to each other; and each would conclude that the other was constituted with Similar Powers, possessing a similar Principle of Life and Motion, and affected in a similar way by the same Objects. The one, prompted by a powerful sensation of Hunger or of Fear, would be understood by the other, who, in like circumstances, had experienced Similar Sensations. If the object or cause of such sensations and emotions were present, it would be easy to make Signs, whereby to point them out: if these objects were not present, an attempt would be made to indicate them, by imitating certain Sounds, Cries, Motions, or Actions, peculiar to them, or in some degree descriptive of them: and, lastly, if it were necessary to make a Communication respecting things that are not objects of Sense,—an Inference of the Understanding, for example, or a Sentiment of the Heart,—the natural sagacity of the Human Mind would suggest some Analogy between these Impressions and the Qualities of Sensible Objects, by which they might be represented to the Imagination, and conveyed to the feelings of the Auditor.

Such are the Elements of the Language of Na-

ture—an Instrument originally calculated for denoting and describing those Objects which address themselves immediately to the External Senses, or which are closely connected with the several Sensations which are made through the Medium of these Senses; and which, of consequence, could alone fully answer the purposes of Communication, when Intercourse among men was nearly confined to Outward and Sensible objects. It is very obvious, however, that this mode of communication would be gradually extended and improved, in proportion as Society enlarged, and the Number of objects and ideas increased; and, being ourselves in possession of a more perfect System of Language, we cannot easily be brought to comprehend to what a degree of Perfection the former is capable of being carried. Some notion of it, indeed, may be formed by attending to the progress of Natural Language in Children—to the language of Dumb Persons—to the art of Pantomime, as practised both in Ancient and Modern times—and to the modes of conducting Traffic among Rude Nations unacquainted with one another's Language. These subjects afford instructive, and, at the same time, very amusing Materials for Lectures, at this Stage of the course. They lead the mind of the Student to the history of Remote Times, and supply him with interesting views of Human Nature in its progress towards Civilization. A Contest, for instance, is recorded to have taken place between *Cicero* and the fa-

mous actor *Roscius*. The actor challenged Cicero to give him a Sentiment which he could not express by significant Gestures. Cicero accepted the Challenge, and gave him a subject;—a Passage, it is probable, selected from one of his animated Orations. Roscius expressed the meaning to Cicero's satisfaction. The latter then made some Change in the sentiment, and varied the Tone of Passion; whilst the former, with great facility, accommodated his Natural Language to the several changes thus introduced. Still, it will be readily admitted, that the mode of Communication now alluded to, was, in many respects, essentially defective; and it was the Perception of its defects, and the increasing Necessity for a more perfect System of Signs, which, in process of time, gave birth to the most surprising and useful of all human inventions, an Artificial Language; consisting of sounds having scarcely any Connexion with the Things signified. This effort of ingenuity, too, appears still more astonishing, when it is considered that the Principal Steps which led to its establishment were taken in those periods of Society which are usually thought Rude and Ignorant: and, indeed, it is a remarkable Fact, that no Nation, however uncivilized, has been found altogether destitute of a Spoken Language.

It has been already remarked that, from the very nature of the Case, and owing to the want of early documents, which, perhaps, were once in existence,

we are unable to trace the History of Human Speech. Still, it will prove of some advantage to the Student, if any Assistance can be given him in tracing or in marking the probable Steps by which the Inventors and Improvers of Language were conducted, in their departure from the language of Natural Signs, to that of an Artificial Notation.

During the existence of Natural Language, as the sole Vehicle of Communication, it would be found, that, of all the Classes of Natural Signs, those by the Voice were capable of the greatest Distinctness and Variety. Vocal Intonations, too, are, in some respects, the most Natural Expression of Feeling; and the application of Sounds to denote External Objects, would be much promoted by the principles of Association and Imitation, which would lead men to use, as the Names of things, the particular sounds which any of these objects respectively emit. Thus, every one has had an opportunity of observing the disposition in Children to call the Dog, the Cat, Birds, and other domestic Animals, by names resembling the several sounds which these animals utter. Many Analogies and Relations would, in like manner, be observed between Sounds and objects not animated. Their Loudness, their Lowness, their Softness, their Hardness, their Quickness, and their Slowness, would all be associated with objects possessing qualities of a similar character. In the early periods of Language, in fact, Men are unacquainted

with words altogether Arbitrary. Prompted by Necessity, aided by the Powers of Imagination and Association, in discovering Analogous Sounds, and guided by Reason in the Application of them, their number of Imitative Vocables would, in due time, become so great as to form the Basis of a Regular Language. The Sounds first made use of in Primitive Languages, it is therefore very probable, represented a whole Action or Event; the same Terms denoting at once the principal Occurrence, and the several Circumstances connected with it: and, as the words in the Iroquoise and other Rude Languages are, in general, very long, it is not unlikely that these Tongues have not arrived at that Stage of Improvement, when the Parts of Speech are broken down into smaller Fragments, expressing, separately, the various ideas which enter into the conception of a complex Object or Event.

In following out this subject, I find it useful to bring into view certain Questions which have been agitated by writers, in relation to the Topics under consideration; as having a strong tendency to awaken Interest and Attention in the minds of my Pupils. The following may be given as a Specimen. " How do men learn to appropriate Artificial " Signs as the Names of Things before the Connec- " tion between the two Ideas has been confirmed by " Association? How came the sounds Horse— " House—Cow—at first to represent objects with " which they have no natural Connexion or Resem-

"blance?"—It is answered—By the Aid of Natural Language. The Sound is uttered, and a Look or Gesture indicates the objects to which it is to be applied. Repeated efforts of this kind must, no doubt, be made, before the Power of Association can perform its office without the Directing Sign; but no sooner does Experience form the Connecting Link, than Natural Language ceases to be necessary. In this respect, the Language of Nature serves as a handmaid to the language of Art; stepping in to give assistance whenever it is necessary, and retiring from view when assistance is no longer required. This Connexion, or Alliance, may be traced even where Artificial Language has reached its ordinary degree of perfection. When a person, for example, finds that he cannot clearly convey his Conception of a Visible object by Words, he naturally attempts it by a Draught or Outline of his Subject; and on all occasions, much force may be added to Verbal Expression by means of Natural Language; of which the Range and Power are much more extensive than can ever be acquired by mere Artificial Signs. Indeed, the Perfection of Spoken Language consists in a happy Union of the two.

Again, it is asked, in what Manner, and by what Steps, do Mental, or Intellectual Objects,—Thoughts, and Trains of Reasoning, and Conclusions of the Understanding,—come to be represented by Artificial Signs? The Answer is easy,

and the Ground upon which it rests is fully explained in the Lectures. In one word, it may be said, that the Language of the Senses is the Foundation of the Language of Mind. The Signs which represent Sensible Objects, are applied figuratively to Mental Phenomena; and, from an Analogy more or less remote, the Terms used to describe the Qualities, and mark the Relations of the former, are transferred to express our Notions relative to the Latter. Thus, a person is as well understood when he speaks of the Extent, Comprehension, Depth, and Acuteness of the Mind, as when he applies the same words to Material Objects possessing these Sensible Qualities. Cold, Soft, Hard, applied to the heart; Agitations, Storms, Tempests, denoting States of Mind, are all Terms first applied to objects of Sense, and afterwards, from some fancied resemblance, or Analogy, transferred to the Feelings and Passions. The word Above, Below, Before, Behind, on the Right Hand, and on the Left, are as intelligible, when applied to Mental relations, as in their Primary Application to those which are Sensible and Local.

After adverting to these and similiar Questions, I conclude this branch of the subject with two General Remarks applicable to what has been now advanced, viz. that, in whatever Country, and at whatever Period, the departure from Natural Language, and the progress towards that of Conven-

tion, took place, that progress must have been slow and gradual. It is not to be supposed that any Nation, feeling the Defects of their existing Language, would assemble together, and adopt a general Resolution to depart at once from their former mode of Communicating with one another, and to adopt an entire New System of Artificial Signs. The slightest attention to the Principles of the Human Mind, and to the History of Society, will satisfy us that such a Measure is impossible. Men do not invent Signs until they find the Want of them; and then only gradually, and as their Necessities require.

Secondly, In our endeavours to trace the origin and progress of Artificial Language, it must not be forgotten, that, in this, as in every other Art, many important and very difficult Steps have been gained, not in the ordinary Course of things, but by the Invention and Sagacity of Men of superior Genius, whose attention may have been particularly directed to this subject. It is the natural province of Genius, when conversant with the Arts, to remove Obstacles, to supply Resources, and to practise methods above the reach of ordinary Abilities; and, in the Early Stages of the great art of forming and using a Conventional Language, there can be no doubt that many Individuals, more ardent and successful than others, would occasionally arise; though the Barren History of those Times has not preserved the particular Names, to which Mankind are so much indebted.

ON THE ORIGIN AND PROGRESS OF WRITTEN LANGUAGE.

A Spoken Language, by addressing itself to the Ear, is necessarily confined within certain Limits, can be heard only at a certain Distance, and depends for its preservation, entirely upon the Memory. Many Circumstances, too, must have occurred even in the early progress of Society, when Languages were forming, which would require a System of Signs not only more permanent than Spoken Words, but such as might be used in facilitating intercourse between absent friends, and in conveying intelligence from one place to another. The desire of Communication with persons at a Distance, and of preserving the remembrance of distinguished Characters and remarkable Events, would lead, in the course of a little time, to the invention of Symbols; which, addressing the Mind through the Eye instead of the Ear, might be used for transmitting a knowledge of Facts to the remotest Corners of the Earth, and for preserving the Thoughts of those who had been dead a Thousand Years.

The art of Embodying Language in Visible Signs would be, without doubt, considerably Posterior to that which respects the use of mere Vocal Sounds: and, accordingly, we have accounts of many Nations who are ignorant of the Art of Writ-

ing; but, as has been already remarked, of none who are not in the possession of a Spoken Language. The following are probably some of the Steps which were taken, in laying the Foundation of the wonderful Improvement now under Review.

The First, and indeed the most obvious Device for representing a Visible Object would be to draw an Outline of the whole Figure; and the Next step, in the Progress, would consist in an Abridgement of this outline, by fixing on some Characteristic Parts, and leaving out the Rest—the Head of a Man, for example, instead of the Entire Body. When, again, it became necessary to represent Invisible objects, the intention of the Rude Artist would most probably be fulfilled by using emblems, founded on some Analogy, or Allusion, to objects of Sense; and the Minuter Parts of the information, the peculiar Circumstances attending the Event, or Fact, concerning which intelligence was to be communicated, would be expressed by multiplied Variations or Additions on the Original Draught. These Views as to the Origin of Writing, are, in some measure, confirmed by authentic Records—by the narrative of a Voyage to the Straits of Magellan—by the History of the Conquest of Mexico and Peru—and, particularly, by an Iroquoise History of an Expedition made by the French, when they possessed Canada, from Montreal, against a remote Tribe of Indians. This curious Document was, many years ago, brought to Europe; and

consists of Tablets, wherein is given, by means of a Drawing in Outline, and of Emblem, an account of the Time when the Expedition set out from Montreal—of their March—of their Arrival at the Indian village—of the Attack—the number of Killed and Wounded, &c. See "Traité de la Formation Mechanique de Langues."

The Imperfection and Obscurity of the Hieroglyphic mode of Writing, which would necessarily increase with the Progress of Knowledge, and the utter Impossibility of ever accommodating it to the manifold purposes of an extensive Communication, suggested, it is probable, to some happy Genius, the most valuable of all Improvements in the Art of embodying thought in Visible Signs—the Method of writing by ALPHABETICAL NOTATION. This astonishing Invention, it is well known, proceeds upon an Analysis of the various Sounds employed in Human Speech, and upon a Discrimination of the principal Elements into which they are reduced, by means of distinct Visible Characters. As soon as the Attention was directed to this View of the subject, it would naturally enough occur to the mind of an Ingenious Man, that, as the same Sounds are frequently repeated in Vocal Enunciation, the whole Elementary Sounds of a Language, even when arrived at considerable Perfection, might be represented by a Limited Number of Marks or Letters: and, in this way, was constructed that System of Characters, denoting at once the Simple

Sounds of Spoken Language, and the component parts of Written Language, to which has been given the name of Alphabet. As, too, the Principal Elementary Sounds depend almost entirely upon the Conformation of the Organs of Speech, this Discovery could be easily adapted to all the Tongues and Modes of Utterance in use among men; and, as the same Alphabet suits the Language of ancient Rome, and those of Modern Europe, so might there be the same Uniformity among the Greeks and all the Nations of the East.—In the Lectures delivered on this Subject, the method of conducting an analysis of Vocal Sounds is explained at length, and illustrated by Examples.

It is extremely probable, that Mankind owe this noble Invention to the Genius or Industry of one Individual; and yet no Memorial of the Inventor is to be found; no Account of the Country in which he lived; nor even of the particular Epoch in the History of the World in which he accomplished this great Achievement. On no occasion is the Philosopher more disposed to lament the Deficiency of Ancient History, and the very imperfect and deceitful notices which are furnished by Tradition.

This Division of the Lectures is concluded with some account of *General Grammar*; or, in other words, of the Principles upon which Philosophical

Grammarians have attempted to discriminate and classify the component parts of Human Speech, whether Written or Spoken. As men have everywhere the same Powers of Mind; as the Intellectual Faculties manifest, in every Tribe of Human Beings, the same general Character, and perform the same Operations according to their several degrees of improvement or perfection; and, as the people of every Climate have nearly the same Feelings to express, and the same Objects to name, it was to be expected, that a Common Basis, and a great Similarity of Structure, would be found in all Languages. They all necessarily agree in Substance; differing only in External Form, and in what may be called their *Minor Accidents.* Thus, every person, acquainted with more than one Language, must have perceived, that, in all, there are the same Classes of Signs, the same Relations, and the same Functions among the Words which compose them.

The Order in which General Grammar is treated of, in the Lectures, is given in a printed Syllabus of these Lectures, which is put into the hands of the Students. 1st, An Account is given of the different Classes of Signs, and of what constitutes a different Part of Speech.—2d, Of the Changes on the Termination of some of the Classes of Signs, made with the View of accommodating them to the purposes of Communication.—3d, Of the Principles which regulate the Position or Collocation of

Words in the Formation of Sentences; according to what may be denominated, the Natural—the Artificial—or the Rational principle of Arrangement. But, as it would be improper to enlarge on these subjects here, suffice it to say, that the principal writers on General Grammar have been carefully consulted, for the express purpose of Extracting from them such Materials as might seem best adapted for giving a distinct account of the Origin, the Progress, and Formation of Language; for explaining the Connexion which subsists between the several Classes of Words and certain Operations of the Mind; and, lastly, for affording such a degree of knowledge to the common Source and Affinities of Human Speech, as will constitute the best Foundation for an intimate acquaintance with any Particular Language, which it might, at any time, be necessary to study.

Finally, on this head, the subjects of this Division are peculiarly calculated to promote the General End of these Lectures; namely, the Improvement of the Powers of Acquiring and Communicating Knowledge; for they afford suitable Means of encouraging Thought and Reflection in young persons. A happy Illustration of the Origin and Progress of Artificial Signs, may be obtained by watching the Beginning and Progress of them in Children. The Student can extend his observations to the Condition of Children, before they know the use of Artificial Signs, when all their Communication

is by Natural Language. They may perceive how the Association begins—and how it is strengthened—the Steps by which they pass from Natural to Artificial signs—from signs that first denote Sensible Objects, and are afterwards transferred by Analogy to those that are Intellectual and Spiritual—and, finally, the Principles which lead them to join words together in Sentences, to express a Complete and Continued Thought. In this way, it must be allowed that Mental Experiments may be gone through. Trials may be made to discover the natural Workings and Tendencies of the Mind, in the Efforts it makes to Communicate by External Signs. Thus instructed, the Student can raise his thoughts a Step Higher, and direct his Attention to the State of Early Nations and Tribes, and the progress of Language among them. He will find a constant Relation between the Progress of Reason and that of Language. Where the Language is Imperfect and Defective, the people who speak it will be found Rude and Uncivilized: and, wherever a Language is found Improved and Perfect, there the people have arrived at high degrees of Science and of Civilization. These subjects invite Attention from young persons, and enable them to read the Books which treat of them with Curiosity and Interest.

ON THE ELEMENTS OF INTELLECTUAL CULTURE.

The object which was kept in view, in the Lectures of the Former Division, was to enable the Student to form clear and distinct notions with respect to the Number and Offices of the Intellectual Powers, or Powers of acquiring Knowledge—and also, with respect to their Mutual Dependence and Co-operation, in the several Processes of Sensation, Perception, and Reasoning. I am now to explain, in a similar manner, the Means whereby these Powers may be Improved, whether in point of Acuteness, Strength, or Voluntary Direction; that is, by which they may be brought to discharge their Several Offices, with the Greatest Readiness and Success.

As there is not any where to be found a Complete System of Intellectual Culture, from which Materials for Lectures, in this Department, might be collected; and, as the Rules and Principles, according to which the Improvement of the Higher Faculties of the Mind is actually carried on, have not, as yet, assumed the Regular Form of an Art; it becomes necessary for him who conducts this Important Branch of Public Education, to Select and Arrange, from a Great Variety of Authors; who, both in our Own and in Foreign Countries, have written at great length on the Philosophy of Mind, though without any Direct View to the Cultivation of its Power.

The various means, then, for unfolding the Intellectual Faculties of the Human Being, from their First or Original State, to their Highest Pitch of Improvement, may be brought under these Two Heads—the Education of Nature, and the Education of Art—the First comprehending those which are Provided by the Constitution of the Mind itself, for exercising and Strengthening its Native Energies; The Second embracing such Methods as are employed by Parents and Instructors, in the Season of Youth, or which the individual himself may Apply, when he becomes Qualified to understand the Nature and Object of Mental Culture. It is, perhaps, impossible to Define the Exact Limits which divide these two Sources of Improvement, or to point out precisely where the Former Ends and the Latter Begins; for, by the Secret Operation of the Laws of our Nature, many important Steps are gained before we are capable of receiving Instruction, or Assistance, from those around us. Of this kind are those Numerous Intellectual Habits, of which we cannot explain either the Origin or Progress. We cannot, for example, form any Conception of the Manner in which the Sense of Touch Instructs the Eye to judge of Distances. Nor can we understand those Mysterious Lessons, by which the Mind was first taught to associate External Signs with Notions and Sensations; or those by which it is led to infer the Externality of Material Objects, from the Impressions produced by them on

the Sentient Principle within. These Lessons do not proceed from the Counsels, or Wisdom, of Man; but are provided for by the Great *Author* of *Nature*, in the Constitution which he has given both to the Human Race and to the Organized Matter with which they are surrounded: and, thus, as the Tree, planted in a proper Soil, springs up from the Seed, and reaches Maturity, without the intervention of Care or Labour, so do our Mental Powers possess Principles of Inherent Growth and Strength, by which, in due time, they arrive at that degree of Perfection and Vigour to which they are limited upon earth. "*Crescit, occulto velut arbor aevo.*"

Ignorant, to the Degree we confessedly are, of the Nature of Mind and of Matter, we shall never be able, in our present state of Existence, to comprehend the precise Character of those Impressions which Material Objects produce, through the Instrumentality of the Senses, upon the Sentient Principle in the Soul of Man. We know, however, that External Circumstances may be more or less favourable to the Expansion of the Intellectual Powers; that, in one Situation, the Progress is more Rapid, and that, in another, it is Slower and more Limited. Thus, suppose an Individual shut up in a Dungeon, from the earliest period of his life, with the means of receiving support within his reach, but altogether removed from the Impressions of External Objects; his In-

tellectual Powers, from want of Exercise, would remain in a Dormant State, weak, and hardly capable of Excitement. But, let the same individual be exposed to the Influence of External Situation; let him come in Contact with the various objects of Desire and Aversion—of Pain and of Pleasure—of Occupation and Pursuit—which occupy the Regions of Society; in such Circumstances, his Faculties would instantly make a Start forward; he would speedily acquire the Use of Reason and of Language, and gradually form those Habits of Mental and Corporeal Activity, upon which Happiness and Improvement so essentially depend.

In this division of the Lectures, I endeavour to give a view of the State and Acquirements of Rude Nations, prior to the influence of Systematic Education—of the Intellectual Powers which are unfolded in such a Condition of Society—of the Circumstances Favourable or Unfavourable to their Developement—of the peculiar Talents and Virtues which are called forth by their Situation—of the Origin and Progress of their Ideas in relation to Property and Personal Rights—of the Common and more Necessary Arts; and of their first Approaches to Science and General Knowledge. It is shewn that to this Education of Nature may be traced the Rudiments of those Useful and Surprising arts, which are carried to such high Degrees of Perfection in Civilized Society. The

Ship-of-War, with all her Appurtenances, may be referred to the Indian Canoe—the magnificent Palace, to the Hut or Cottage—and the complicated Systems of Modern Government, to the Simple Forms of Authority or Subordination, which prevailed among the Primitive Tribes of our Race.

An opportunity is thus given of Enlivening the Lectures, by introducting a variety of Notices and Anecdotes, well calculated to make an Impression on Youthful Minds;—to Invigorate their Faculties by the constant Exercise of them;—to suggest Subjects for future Speculation and Enquiry—and, above all, to supply Materials for Executing the Essays which, agreeably to the plan of Discipline established in this Class, are regularly Prescribed and Exacted. In Selecting these Notices, too, particular Attention is paid to such as will illustrate the Progress of the Human Faculties, under the Education of Nature, whether as it respects Rude Nations, or the Condition of Early Childhood amongst ourselves. Such Subjects are well suited to the Comprehension even of the Youngest Student. His Observation is invited, on all hands, to the Study of Human Nature in every Stage and Degree of Advancement. A Child thus becomes an Instructive Companion to the Young Philosopher. He beholds, in the gradual Opening of the Infant Faculties, Propensities, and Desires, the best

Natural History of Mind; he perceives, in the First Play of Imagination, and in the First Attempts at Reasoning, the Prolusions of those Brilliant Powers, which Charm the World in the Poet, and Instruct it in the Man of Science

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ON THE EDUCATION OF ART.

The Education of Nature is the Basis of that of Art. The Teacher does not Begin the Course of Education, but merely Carries forward that which is already considerably advanced; and, the more closely Artificial Systems follow the Method which is pointed out by Nature, the more likely are they to attain success. But, although much is unquestionably done by Nature, there is, notwithstanding, a wide field opened up for the Industry and skill of the Preceptor; for it is a Truth founded upon Philosophy, and confirmed by Experience, that, as there is one Art for improving the Vegetable Tribes, by which they are frequently brought from Weakness to Strength and Beauty, and another for training the Inferior Animals to Obedience and Usefulness, so is there an Art for Improving and Training the Children of Men, in Mental Vigour, and the most Valuable Acquirements. In Proportion, too, as the Original Powers and Capabilities of the Human Being surpass those of every other Order

of Created things with which we are conversant in this Lower World; so will his Progress be greater, in actual Improvement, and the Fruits more Precious which spring from a well directed Culture. Were we to compare a Wild Man—such as was found in the woods of Hanover, in the reign of George I.—with a Monkey, we should no doubt, perceive that the Degree of Reason in the former somewhat exceeded the Portion possessed by the latter. The great Specific Difference, however, between the two Animals, consists, not so much in their Actual Condition, as in their respective Capacities of Improvement: for, whilst the one, by Suitable Culture, at a Proper Season, might have been taught to Speak—to Read—to Write—to Acquire Art and Science—no Knd or Degree of Culture could have produced such Effects upon the other. The Man might have been improved so as to enter upon the Deepest Calculations, and to follow out the most Intricate Trains of Reasoning; whereas, the Monkey, even under an Enlightened Instructor, would have only continued to Chatter, and to Practise its various Unintellectual Mimickries. The Range of Improvement in the Inferior Animals is very limited; and, in every Case, begins and ends with the Individual. It is never communicated to the Species. Thus, the Bees on Mount Hyble, at this present day, have neither more Art nor more Industry than those which made Honey on it, in the time of Virgil. Nor do Beavers, in these

times, build their Houses more Scientifically nor do Birds make their Nests more Skilfully, than in the Early Ages of the World. But, in the Human Kind, the Species at large Improves, as well as more favoured Individuals: and Man, who once lived in Caves, or on Trees, or amid the Rocks of the Desert, now forms for himself Convenient and even Magnificent Houses to dwell in—builds Ships—makes his way over the pathless Ocean—and mounts up into the Air in Balloons.

Without entering at greater length into General Views, and without any reference to the Plans of Mental Culture which are pursued in other Seminaries, I am now to give some Account of the System of Instruction, acted upon in the First Philosophy Class, in this University; and which consists chiefly in such Exercises of the Intellectual Faculties, and in such Practical Means and Helps, as appear best calculated to call forth the Natural Powers of the Mind—to Engraft upon it a facility of Acting—to invest it with a ready Command of its various Resources, and to give full Scope to an Habitual Act of Reasoning.

It will not cost much trouble to the Student to peruse the principal Treatises which have appeared on the Art of Intellectual Culture. Previous to the Analytics of Aristotle, no Work on this Subject has come down to us. His Analytics,

or Treatise on Logic, suffered no Elementary Change during the Course of nearly two Thousand years, till the period of DESCARTES, and LORD BACON, when the Treatise on Method by the former, and the *Novum Organum* by the latter, produced a Revolution in that part of Science. Many Treatises have appeared on the Art of Reasoning—the Art of Thinking—and on the Principles of Intellectual Culture,—but they are chiefly to be regarded as Commentaries, Abridgements, and Illustrations, of those Ancient and Modern Works, adapted to the particular View of the Authors.

In conducting the Analysis of the Faculties by which we Acquire Knowledge, I began with the Consideration of those which come first in the Order of Nature; as a Clear Understanding of these leads, by easy Steps, to a Certain and Distinct Perception of the Relations and Offices of all the rest. I shall here follow the same Principle; and consider the Effects of Culture, as applied, in the first instance, to those Powers of the Mind upon which the Exercise of the others depend; or, in other words, to the Formation of those Intellectual Habits, which serve as the Basis of all Excellence, in the Higher Departments of Human Pursuit and Acquirement. Some of our Mental Endowments may be viewed in the light of Handmaids, or Auxiliaries, to the others; but their Importance in the System is not to be measured by their apparent Dignity; and he that would secure the

successful Exertion of the whole must begin with the Improvement of those which seem inferior. Indeed, the order of Intellectual Procedure requires that the means of Culture should be applied, in the outset, to those Faculties from the Operations of which our first Notions and Judgments are formed, and, afterwards, to those which are employed in the more Complex Functions of Comparison, Deduction, and Invention; and, as that particular Faculty by which the Mind directs her various Energies, and acquires the Knowledge of all the other Faculties, ought, in this respect, to take Precedence of every other, as the Subject of Culture, we shall therefore begin with the Power of Attention.

ON THE IMPROVEMENT OF THE FACULTY OF ATTENTION.

In the General Analysis already given of the Powers of Knowledge, that of Attention was particularly described; and the import of certain Terms, denoting different degrees of Intensity in its operation, was minutely explained. Thus, Observation, Reflection, Meditation, may be regarded, as far at least as Attention is considered, as being the same Intellectual Act, modified only by the particular Circumstances which determine the Preference, or degree of Interest, which

the Mind feels for the several Objects of its Inquiry. I state, then, explicitly, that, by the faculty of Attention, I mean the Intellectual Power of Notice, whether directed to External Objects, or to Objects of Consciousness,—and, by the *Habit of Attention*, I mean a Facility and Readiness in exerting that Power, acquired, as all other Habits are, by frequent repetition of its peculiar Act. But I am more solicitous about giving Instructions as to the Means of Acquiring the Voluntary Direction of this most important Faculty, than with regard to the particular Words in which its Office may be defined, or its Operations described; for, though Attention is very frequently Summoned, and even Commanded, by Impressions seizing the Mind from Without, there can be no doubt that it is susceptible of great Improvement, both as to the Intensity of its Action, and, more particularly, as to the Ready Use which can be made of it by the other Faculties. Indeed, it would be extremely difficult to explain the Means of Cultivating the Intellectual Powers of Perception, Memory, Imagination, of Judging, and Reasoning, without a constant Reference to the Effects of Attention; and, on this account, it may be justly observed, that the surest way to attain Success in Improving the Former, is to acquire a Voluntary Direction of the Latter.

The Art, then, of acquiring the Habit of Atten-

tion can be learned by those only who are willing and desirous to make the Acquisition; and the first Step towards Realizing their wish must consist in removing the various Obstacles, Hindrances, and Temptations, which, scattered thickly in the Paths of Youth, would for ever retard their Progress, and defeat their Object. The Diligent Student knows well that the Variety and Constant Recurrence of Sensible Objects exert a powerful Influence in distracting his Attention, even when he most endeavours to fix and command its Operation: he will, therefore, in his hours of Study, remove himself as far as possible from the Reach of an Influence so dangerous and seducing; he will quit the "busy Haunts of men;" withdraw to Retirement and Silence, and thus preclude, at least to a certain Extent, those Solicitations which arise from External things. It is known that a Certain Person, engaged in deep Study, was accustomed to go to Bed at Mid-day, that he might preserve his Mind free from the Distractions to which he would otherwise have been exposed: and the Student, in like manner, will avoid all such Circumstances as would steal away his Attention, or, what is not of less moment, prevent the Strenuous and Undivided Application of it.

But the Disturbing Causes are not all from Without: the Student has also Secret Enemies to encounter from Within, who follow him into the Deepest Solitude. Memory, the faithful Reposi-

tory of his Past Pains and Pleasures—Imagination, the ready Instrument for Anticipating those which are to come—are ever Active in Withdrawing his Attention from the proper Subjects of his Study. To these may be added many hidden Causes of Restlessness, Fretfulness, and Impatience, which cannot so easily be brought to Account, and yet harass the Mind, and unfit it for Exertion. From whatever Source, however, and in whatever Shape the Impediments to Attention spring up, the Student must endeavour to throw them off, with Spirit and Determination; and, if they should not yield to his first Efforts—as it is probable they will not—he must redouble his Exertions, and increase his Watchfulness, in order to secure a Decisive Victory; for Success in this Matter becomes less Attainable in proportion to the Time the Conflict is delayed. The Stream which may be kept within bounds, near its source, gathers Strength as it advances, and may ultimately break down every Opposing Barrier.

To this sort of Negative Preparation for Study must be added certain Endeavours, of a more Direct Tendency, for acquiring the Command of this valuable Quality of Mind. But nearly the whole that can be comprehended on this Head may be expressed in one general Precept;—"Do every thing with Attention." Let the Student Observe, Read, Hear, and Compose with Attention; let him exert Attention in all the Pursuits connected

with the Business of the Class, and in all the more General Occupations by which Knowledge or Science is acquired. Nothing Important can be done or attained without Close and Strenuous Application; but, to Encourage him in this Necessary Labour, it is right to assure him that it will become, every day, less Irksome—that he will soon experience an Increase of Power, not only in the Exercise of this particular Faculty, but of all the other Faculties of his Mind—that his Command over his Attention will be so greatly Enlarged by Habit, that he will be able to Direct it to whatever Subject he may choose; to Continue it Intensely as long as the Subject may require it; and to Transfer it from one Subject to another, as often as such a Transference may be Necessary. Nor will there ever be wanting a sufficient Variety of Occasions on which to Exercise Attention. Wherever the Student goes, he will find Materials for Observation; every Book he reads, in the course of his Studies, will supply him with Matter for Reflection; every Lecture he Hears, and every Exercise he Performs, will require Concentration of his Faculties, and demand from him different Degrees of Attention. In short, as this Property of the Mind must acompany every Exertion of its other Powers, so every Act and Habit, regularly Performed, has the Effect of Improving Attention, and of adding to its Natural Vigour.

These Opinions respecting the Means and

Practicability of Controlling the Attention constitute no Novel Doctrine; for EPICTETUS, the celebrated Stoical Philosopher, though with somewhat Different Views, wrote nearly to the same Effect, at the distance of more than two Thousand Years. "When you Let go your Attention," says he, "do "not fancy you can Recover it when you please, "but remember that, by the fault of to-Day, your "Affairs must necessarily be in a worse state to-"Morrow, and to-Morrow has its Connection with "the Preceding day; and, what is the saddest thing "of all, a Habit arises of *not* Attending, then a Habit "of Deferring the Attention—When, then, do you "not preserve a constant Attention?—I would "Play to-day—What then? Ought you not to do "it with proper Attention! I would Sing; and "what Forbids that you Sing with proper Atten-"tion! Tell me what you could do, where no "Attention is necessary? There is no part of "life to which Attention does not extend; for, "will you do it the Worse by Attending, and the "Better by Not Attending? Tell me what thing "in Life is best performed by inattentive people? "Does a Smith forge the better by not Attend-"ing? Does a Pilot steer the better by not At-"tending? Or is there any of the smallest ope-"rations that are performed the better by Inat-"tention?—But now, you say, I will Begin to-"Morrow to attend. Be assured it is the same "thing as to say, I will be Thoughtless and Un-"worthy to-Day. It shall be in the Power of

"others to upbraid me, and to despise me, to-Day; "but all will be Well to-Morrow. How much "Better to-day! If it be your Interest to-Morrow, "it is much more so to-Day, that it may be in "your Power to-day, and that you may not Defer "it again till the third day."

The Students of the present Age might be subjected to similar Interrogatories. It might be asked, Do you hear the Lectures the Better when you are Inattentive? Can you Write, or Compose Essays, or Perform any part of your Work the better with Inattention? Can you even Trifle well without Exerting some Degree of Attention? These Questions may, indeed, be thought Trivial or Unimportant; but they are, notwithstanding, a powerful Species of Appeal to the good Sense and Feeling of Ingenuous Youth, which they cannot easily Resist, and which they will not be inclined to Despise. Let the words of Epictetus, too, ever and anon, sound in their Ear; "Why should you not "preserve a Constant Attention." Let it be Impressed upon their Minds that their Success, in the Pursuit of Knowledge, depends, in a great measure, upon the Steadiness and Regularity with which they can bring their Faculties to bear upon every particular Subject; that the Power of Attention is the Foundation of the Art of Study; that it Shortens the Process of Investigations, Sweetens the Labour of the Closet, and communicates both Vigour and Readiness to every Intellectual Energy.

All that has been said, however, on the Importance and Difficulty of Acquiring this Valuable Habit, ought not to create any Discouragement whatever in the Mind of the Diligent Student. For his Comfort it may be mentioned, that no Fact is better Confirmed by Experience than that Persons of even Moderate Abilities, and possessed of no Particular Advantages, are capable of Attaining to Remarkable Degrees of Eminence in the Exercise of Attention and Abstraction. In the Mechanical, as well as the Liberal Arts, and even in the common Business of Life, people of every Order of Intellectual Endowment are found to carry on, without Labour or Difficulty, Trains of Thought both Intricate and Profound, and, at the same time, to Acquire Habits of Mental Exertion, which could not have been formed without Deep and Persevering Attention to one Subject. The Division of Labour, indeed, the Cause of so many Improvements in civilized Life, presupposes that the Attention of the Artist is withdrawn from every Study but that which Constitutes the Object of his Profession. "Persons of ordinary abilities, (says "Miss Edgeworth,) Tradesmen and Shop-keepers, "in the midst of the Tumult of a Public City, in the "Noise of rumbling Carts, and rattling Carriages, a-"midst the Voices of a number of People talking "upon various Subjects, amidst the provoking Inter-"ruption of continual Questions and Answers, in the "Broad Glare of a Hot Sun, can Command and Ab-"stract their Attention so far as to calculate Yards,

"Ells, and Nails—to cast up long Sums in Addi-
"tion, right to a Farthing, and to make up Mul-
"tifarious Bills with quick and unerring Preci-
"sion. In the great Public Affairs, the most diffi-
"cult and extensive Calculations are carried on
"by Clerks of an Inferior Station, on whom the
"chief Trouble falls, without either the Encou-
"ragement of Fame or of great Emolument."

The Habits of Attention necessary on the part of the Student, for the Cultivation of the Intellectual Powers, do not require Labour either so Severe or so Constant as that which must be undergone by a Clerk in an Accomptant's office. Young Persons are too often discouraged by the mere Imagination of Insuperable Difficulty, of Fatiguing Exertion, of Subjects of Unfathomable Depth, and of Inquiries that rack the Brain; all of which are commonly associated with the very Idea of a Philosophy Class. They should be informed, however, that more Labour and Difficulty must be encountered, and that there is Occasion for more Patience, more Fortitude, and more Resolution, in the ordinary Acquisitions made by the most common Characters, than is demanded of the Student, in order to understand completely the Analysis, and mode of Culture, of all the Faculties of the Human Mind.

Hitherto, we have been engaged in Explaining the Means of Acquiring the Habit of Attention,

in as far as these Means depend on the Voluntary Efforts of the Student: there yet remains to be Noticed the Assistance which may be reasonably expected from the Teacher. This, as might be Anticipated, will be Confined to the Means which he possesses of Stimulating to Exertion, of Rousing Ambition, of Kindling Emulation, and of occasionally Touching the Sense of Shame. In the Improvement of their Natural Talents, he can bestow nothing but what he derives from themselves. The Treasure with which he Labours to Enrich them, is in their own Possession; and all he can do is to present Motives strong enough to induce them to Realize it, and to turn it to Advantage. The Ornament of Learning, and the Dignity of Science, cannot be Transferred from one Man to another: they cannot be Inherited; they cannot be Bought with Money; nor can they be Bribed by Favour. The Tax of Labour which is imposed upon every Great and Noble Acquisition must be paid by the Individual who Aims at it. The Teacher, therefore, does not promise such Assistance as will exempt from Toil: he merely endeavours to Awaken Resolution, and to Sustain Perseverance. He Watches the favourable Moment to Spread before the Ingenuous Minds of Youth, those Views and Motives which are most likely to touch the Springs of Action. The Rewards of Industry may sometimes appear Remote or uncertain, and, seen through that unfavourable Medium, their Efficacy, as a Stimulus to Ap-

plication, cannot fail to prove both Weak and Inconstant; but the Atmosphere through which they are Viewed, may be often rendered Pure and Transparent, by the aid of a Vigorous Imagination; and the Independence or Distinction which is longed for, may be brought so Close upon the Eye, as to Rival the Impressions of Present, Actual, Existence, and thus to become the Predominant Motive of Exertion, in the Mind of the Aspiring Student. If the Sanguine Possessor of a Lottery Ticket, who may not have even the Chance of One to a Hundred Thousand, can so easily Anticipate Future Events, Realize Fictitious Scenes, and Gratify himself with the Imaginary Treasure of the Highest Prize; why should not the Fancy of a Student be Invited, upon proper Occasions, to Wander amid those happy Regions, in which he hopes one day to Dwell; and thus to Draw, from the rich Stores of Hope, a powerful Solace for the Fatigues and Anxieties of the Passing Hour. Nor is it the Imagination only of his Pupils to which the Teacher may sometimes Successfully Address himself: he may likewise Appeal to their Reason and their Sense of Duty. Every thing Great and Good may be brought within their View, as the Object of a Modest and Rational Expectation—The Improvement of the Highest and Noblest Powers of Intellect—the Possession of Knowledge, Taste, and Eloquence—the enviable Privilege of being Useful—and the Respect and Affection of Wise Men. The secret thoughts of

the Students may, without Offence or Inquiry, take Possession of such Situations in Life as are most Congenial to their Taste or Suited to their Talents, and fancy themselves the Legislators—Philosophers—Heroes—Orators—Poets, and Statesmen, of future Times; or,—as the venerable Servants of God, in their high capacity of dispensing Knowledge, Comfort, and Happiness, to Individuals, to Families, and to Nations.

The Observations just made, on the Means of cultivating Habits of Attention, have extended to such a Length, and embraced so many Details, as to render it less necessary to explain, with any degree of Minuteness, the Mode of Culture applied to the Other Intellectual Powers. In truth, the Improvement of the latter depends so much upon the Method of Training, and Exercise, recommended in the present Section, that it would not be Easy to Enter upon it, in Detail, without incurring the risk of repeating nearly all that has been already said.

ON THE IMPROVEMENT OF PERCEPTION BY THE ORGANS OF SENSE.

The Operations of the Perceptive Faculty, as exerted through the Organs of Sense, are partly Voluntary and partly Involuntary. Whenever

these Organs are Impressed by External Objects, the Mind necessarily receives the Sensations which they are respectively fitted to produce: and the Notion, or Representative Thought, too, of any Object,—a Tree or a House, for example,—must Correspond exactly to the Impressions received from it, by means of the External Senses. In Sensation, properly so called, indeed, the Mind is entirely Passive; having no Power either to Diminish or Increase, by an Act of Volition, the Effects produced upon the Sentient Principle by the Qualities of Matter. The Odour of a Rose, or the Stench of Asafœtida, when impressed upon the Olfactory Nerves, is as much beyond the Reach of the Will, to Modify it in any way, whether to Increase or to Weaken its Intensity, as is the pain of Tooth-ache or the noise of Thunder. The Voluntary Power of the Mind in Sensation is confined to the simple Acts of Directing the Organ to its corresponding Object, of Continuing it a Longer or a Shorter time in Action; and, when no Physical Impediment intervenes, of Withdrawing or Transferring it to another.

It is sufficiently confirmed by Experience, however, that the Faculty of Perception, as more immediately connected with the Senses, may be greatly Improved, in its most Essential Operations. When the Pursuits of any Individual have a more Constant or Frequent Intercourse with the Objects of one Sense than with those of ano-

ther, that Sense becomes much more Acute, and, at the same time, much more Ready in its Discriminations. The Wine Merchant, for instance, acquires great Niceness and Delicacy in distinguishing the Flavour of Wines; and the Perfumer in discriminating Odours. But the Eye and the Ear, it may be observed, are susceptible of Improvement in this way, to a much greater Extent, than any of the other Senses. Nay, in some Cases, the Power of one Sense seems almost Transferrable to another. Thus, Persons born Deaf acquire acuter Perceptions of Sight: so much so, indeed, as to distinguish Difference of Sounds by the Motion of the Lips. In truth, those who have no peculiar Interest in Improving any one of the Senses, are frequently struck with Astonishment, at the Success of such Individuals as, from some accidental Loss, or Defect, in the Outward Instruments of Perception, have been compelled to Concentrate all their Care, in Cultivating those that remained Entire. And such Instances of Improvement, it is worthy of remark, as the Material Organs of Sense are nearly the same, in every order of Men, must arise solely from continued Efforts of Attention, stimulated by the Necessity of Particular Situations. It is to the Intellectual Energy, which in such Cases is made to Accompany, with peculiar Force, every Organic Impression, that we must ascribe the surprising Facts now briefly alluded to: and not to any Singularity of Conformation, in the External In-

struments, or to any other circumstances whatever of a Corporeal Nature.

Taking a more general View of this interesting Subject, it may be stated, as a Practical Inference, that the Improvement of Perception, and the Acquisition of those other Intellectual Habits, which, from the Rapidity with which they Act, appear almost Instinctive, are the Natural result of the frequent Repetition of certain Acts which were, at first, Slowly and Deliberately performed. Upon this Principle, which is, in many respects, one of the most Important in our Mental Frame, may be explained those Astonishing Processes of Intuitive Perception, which at once Constitute the most Valuable part of our Knowledge, and prove our surest Guide in interpreting the Laws of Nature. For instance, it was by Acts of Attention, frequently renewed, at a period, and from Motives, wholly forgotten, that the Mind first learned to Determine Distances by the Eye: whilst the no less wonderful Process of Associating Thought with External Signs—of Rapidly Gathering the meaning of an Author from a slight Inspection of his Words—originated in Separate Acts of Volition, painfully, and perhaps reluctantly, repeated. Upon the whole, then, and without further Illustration, it may be remarked, that the Man who has acquired a Habit of Attention multiplies, as it were, the number of his Senses, by Enlarging their range of Action, and by Increasing their Powers of Discrimination.

The External Senses, particularly those of Sight, Hearing, and Touch, have, in Modern Times, been greatly Extended in their Operation by the Assistance of Art. It is admitted, indeed, that the different Degrees of Heat, or of Cold, or of the Weight of the Atmosphere, cannot be immediately ascertained by the Sense of Touch; but there are Artificial Senses invented, so to call them, such as the Barometer, the Thermometer, the Calometer, &c. which have added greatly to the Extent and Precision of such Sensations. As to Sight, again, not only have the Weakness or Defects of the Organ been met with by suitable Remedies and Substitutes; but the Science of Optics, and the various Discoveries which have been made, relative to the Properties of Vitreous Substances, have extended the Powers of Vision almost beyond Imagination itself. The Ear, too, has been greatly Assisted by the use of Instruments; formed at once on the knowledge of its Structure and of the Laws which regulate the Propagation of Sound.

Since, then, the Power of Perception by the Organs of Sense has been so much Increased by the Industry and Ingenuity of Men; and since the most Important Results, altogether unexpected during their first Efforts, have been subsequently gained by Study and Perseverance; why may we not Anticipate still greater Success in some or other of the sublime Discoveries which have been

lately made, in different Departments of Science. When Philosophers first directed their Attention to the Properties of Vitreous Substances, and commenced their Experiments on the various Qualities which these Substances present, they had certainly no Expectation that they were paving the way for such Improvements in the Arts, connected with Optics, as would enable their Successors to watch the Motions of the most Distant Bodies in the Universe, and to examine into Objects so extremely Minute as even to escape the detection of unassisted Vision. But Men have so often exceeded their own Expectations, and the Inquirers of one Age have so often Overleaped the bounds prescribed by those who went before them, that we are not warranted to set Limits either to the Discoveries of Science, or to the Improvements of Art. If, in an Assembly of the Choicest Spirits of Greece or Rome, and in those Conversations in which Sparks of Genius darted from Mind to Mind, any individual had thrown out a Conjecture that the time would come, when Men would traverse the pathless Ocean with as much certainty as they walked on the Appian Way, he would probably have been considered as a Visionary or an Enthusiast. Before the discovery of America by the Europeans, the People of Mexico lived in Security and Splendour, and, no doubt, thought themselves the happiest and most enlightened Nation upon Earth: when, on a sudden, there arrived amongst them

a race of Men so far surpassing them, in all manner of Attainments, as to appear, in their Eyes, a Superior order of Beings. Previous to the Arrival of the Spaniards, if any one had announced even the Possibility of such an event, he would have been treated with a degree of Ridicule equal to that which we would pour upon the Man who should predict a visit to our Globe from the inhabitants of Mercury or the Georgium Sidus. In Ancient times, it was known that Amber, when rubbed, Attracted and Repelled lighter Bodies with great Velocity: and, even a Century ago, when only a few detached Facts had been collected on the Science of Electricity, who could have foretold that, by future Discoveries of the Properties of this Wonderful Fluid, we should be able to explain some of the most astonishing Phenomena of Nature—to bring the Thunder from the Cloud, or to Conduct it past us with perfect safety? The Marquis of Worcester first observed that the Steam of Boiling Water had Force sufficient to raise up the Cover of a Kettle; but he could not then imagine the numerous and amazing Uses to which Steam has been since applied; or that it would be substituted in the place of Wind and Water, in the Movements of Machinery.

Such Facts and Considerations, submitted to the ingenuous Minds of Youth, intent on Study, answer a double Purpose. They not only furnish

suitable Materials for the Exercise of Reflection, but they open the Imagination to lofty Views of Science, as connected with Human Genius and Industry—they hold out a most encouraging promise of Success to Steadiness and Perseverance—and thus, naturally, call into Action the latent Principles of Ambition, and the Love of Excellence. They are introduced here expressly with that View; from the knowledge that good Impressions fixed in the Mind indirectly, or from a survey of what has been actually Achieved by the patient Working of Philosophy, frequently contribute more to create Industrious Habits, and to kindle the Fire of Genius, than the most enlightened Precepts, or the most affectionate Admonitions. And, indeed, when we compare the little which we really know, even after the boasted Improvements of the Present Age are added to those of all the Ages which have Preceded it, with the innumerable Mysteries which still remain unexplained;—above all, when we contemplate those glorious Luminaries which are just brought within our View, and of which we know comparatively Nothing, we have good reason to believe that all we have yet Discovered, and reduced to the Form of Science, are but so many Steps at the bottom of a long Ladder, by which Future Generations are to ascend to Higher Degrees of Perfection. The Prayer naturally suggested by these considerations, and which should arise in the Mind not only of the pious Christian, but of the ardent Philosopher, might

be expressed in these beautiful Words, "O send "forth thy Light and thy Truth, and let them lead "and guide us to thy Holy Hill."

ON THE IMPROVEMENT OF THE FACULTY OF MEMORY.

A REMARK, applicable more or less to the Cultivation of all the Powers of Mind, may be made, with peculiar Suitableness, in regard to that of Memory; namely, that its Improvement depends more upon Exercise than upon any Rules of Art. Indeed, frequent and regular Exercise, on proper Subjects, comprises all that can be recommended in the form of Precept, relative to the Culture of this important Faculty. In the Analysis given in a former part of these Lectures, some notice was taken of the Office and Operations of Memory, as distinguished from the other Intellectual Powers; and some Observations were made as to the Varieties which it manifests, in different Individuals, in point of Strength, Readiness, and Tenacity: and that it is also susceptible of high Degrees of Improvement may now be Unanswerably proved from the following Considerations.

The Memory in Children is Weak and Unretentive, extending only to the few Objects which produce marked Sensations of Pleasure or of Pain.

It receives, however, Additions every day; and gradually becomes able to bear the Burden not only of Remembering a great Variety of Facts, but likewise the Names or Signs by which they are made known: thus continually enlarging its Powers in proportion as the Field of Knowledge is opened and extended. In due time, all the Words, or Signs, of the Vernacular Tongue are remembered; and, after one Language has been acquired, the Memory, even in its ordinary Condition of Vigour and Improvement, so far from being Oppressed with its Load, seems only to become better prepared for further Acquisitions of the same Nature. When endowed with additional Strength, from the maturity of Years, and the Progress of Education, it will comprehend the leading Facts and Principles of several Sciences, altogether Unconnected; and, in some Individuals, it proves itself equal to the Retention of nearly the whole Stock of Literature, of History, and of the more Abstract Doctrines of Metaphysics and Morals.—To return, however, to the main Object of this Section, it may be observed that the Improvement of Memory depends, in an especial manner, upon the three following Circumstances.

1st—To give ourselves a just Claim to confide in the Faithfulness of this Faculty, it is essentially requisite to exercise Attention, whilst the Mind takes Cognizance of Objects, whether presented to the Senses, or to the Intellect: for, in proportion

to the Intensity with which the Power of Notice is exerted, the Strength and Tenaciousness of the Memory will be progressively Increased. Common Phraseology, on this Subject, clearly points out the general Feeling of Mankind, as to the Connection between Attention and Reminiscence. "I Remember it well," we say, "because I gave the "closest Attention—I do not Remember, because "I gave little Attention." It has been already shewn that a Habit of Attention may be acquired; so also, then, may an improved Habit of Remembering.

2d—The Memory may be improved by a Judicious Selection of those Things upon which it is to be exercised. As it is impossible to remember Every Thing, and as the Capacity of this Mental Endowment, although Extensive, is certainly Limited, it will greatly assist the Processes of Recollection to throw off all such Matters as are Useless, Frivolous, or Unimportant.

3d—The Memory is very much assisted by Arrangement. The Details, Facts, and Principles, which claim the exercise of Recollection, are so Numerous and Perplexed, that, to be able to Recall them, in their proper Relations, and to Apply them for the various Purposes of Argument or Illustration, it is absolutely necessary to Class them under their several Heads, and to connect them with leading Associations. In truth, the different Expedients

now recommended, as being completely within the reach of Practical Discipline, all proceed on the well known Principle, that the Power of Reminiscence is enlarged by Strengthening the Bond of Association among the several Parts of our Knowledge; particularly among those which happen to have a common Basis, or which bear upon a common Object.

These Subjects are illustrated at considerable length, and with copious Details, in the Lectures delivered to my Pupils; and this particular Topic is concluded with an Account of some of the Artificial Methods for Improving the Memory, which have been adopted both in Ancient and Modern Times: and with an attempt to account for a Peculiarity of Memory not Uncommon, viz. Extraordinary Powers of Retention united with Inferiority of Judgment, in the same Individual.

ON THE CULTURE OF THE IMAGINATION.

In the Analysis of this Faculty, presented in a former Part of these Outlines, it is stated, that its peculiar Office is to Reproduce to the Mind Notions and Sensations formerly acquired by the Ordinary Exercise of the Intellectual Powers; and to render them again the Subject, or the Materials, of other Mental Operations. In this way, the Mind is empowered to Contemplate, Compare, and

Select the Ideas of Absent Objects, as if they were actually Present to the Senses; and the Representations, thus made, might almost be considered as Another Mode of Perception; differing only in point of Reality, and in the Vividness of the Impression.

It is further stated, in the Analysis, that the Operations of this Faculty are General; and extend to the Reproduction of Notions, or Combinations of Thought, as well as of Sensible Impressions, originally made on the External Organs;—that it supplies, at once, the appropriate Materials and the Bond of Association, for those Intellectual Processes, which are constantly going on in the Mind;—and that it acts a principal Part in those creations of Fancy which, derived from a union of Abstraction, Generalization, and Taste, constitute Works of Genius in the Fine Arts. The Imagination, indeed, neither Abstracts, nor Generalizes, nor Selects; but it Reproduces, and supplies Materials for these several Processes, according to the Laws of Association which regulate the Procedure of the Mind, in its Recollections and Combinations.

It has been maintained that, as Imagination is the gift of Nature, it cannot be Acquired, or even greatly Improved, by any species of Culture. This Opinion, however, it is very evident, must proceed from a Narrow View of its Nature and Offices; just as, in common Language, a Man is said to

have no Imagination, who discovers no marks of Poetical Fancy. There are, indeed, it will be readily admitted, Peculiar and very Singular Modifications of this Faculty; arising either from Original Differences in the Constitution of Mind, or from early Associations afterwards Forgotten, and which cannot, at a more Advanced Period, be produced by the utmost Efforts of Study, how long soever continued: and this holds more particularly true with respect to that Variety of Imagination on which Poetic Genius chiefly depends. But, notwithstanding these Facts, it may be Asserted, without fear of Contradiction, that, with regard to this Intellectual Power, as with regard to all the other Endowments of Mind, certain Degrees of Improvement are within the reach of every Individual who earnestly endeavours to attain it.

In truth, the simple Consideration that this Faculty, like most others, is in a constant state of Action, necessarily implies the Notion of Culture and Improvement. In very young Persons, too, its Efforts are Weak, and its Combinations Unsteady; but, as the Range of Knowledge Enlarges, and the Number of Ideas is Increased, its growing Power makes itself manifest in the Vivid Reproductions which it places before the Mind, and in the Boldness of its varied Creations. When Philip Planned the Conquest of Greece, or when Scipio and Polybius Anticipated the Destruction of Carthage, their Imagination must have been Strong

and Steady Enough to Present, before the Eye of their Minds, Extensive Combinations of Distant Events respecting the relative State and Condition of these Nations and the various Probabilities which fell within their View. Their Imaginations could not have Performed for them this Office when they first began the Study of Politics. When Sir Isaac Newton first began the Study of Astronomy, he would probably find it extremely difficult to combine the Revolutions of the Earth and Moon, in their Orbits round the Sun; but, in process of Time, his Imagination would, with the utmost Ease and Steadiness, place before him the whole Solar System, in the order of the relative Distances, Magnitudes, and Dependencies of the several Planets which compose it. When the celebrated Mr. Burke, too, at the very Time when the greatest part of the learned Men in Europe were rejoicing at the pleasing Prospect opened up by the French Revolution, foresaw the Confusion, Anarchy, and Bloodshed, which followed so hard upon it, his Imagination must have held up to him a long Train of Events, linked together as Cause and Effect, and must have manifested a degree of Energy to which, in the early Periods of his Life, it would have proved totally inadequate. It is, therefore, very obvious that there is a Gradual Progress in the Development of this Faculty, and, consequently, that there is a fair Field spread out for the Application of Culture.

It is well known, from Experience, that the Ac-

tivity and consequent Improvement of the Imagination depend not a little upon the Character of the Objects with which it is first Occupied. The Great, the Sublime, the Beautiful, the New, and Uncommon, in External Nature, are not only Striking and Agreeable in themselves, but, by Association, these Qualities powerfully Awaken the Sensibilities of the Heart, and Kindle the Fires of Youthful Imagination; whereas, there are certain Objects so Tame, and Pursuits so Ignoble, amidst which the early Years of Life are sometimes doomed to be spent, as neither to have produced one Impression, nor excited one Train of Thought, which could ever afterwards enter into the Conceptions, or aid the Fancy, of the Painter or the Poet. If, therefore, the Student shall permit Objects which are Mean, Low, and Sensual, to usurp Possession of his Mind; if the Books he reads, and the Studies he pursues, are contaminated with gross Ideas, he has no right to expect that this Omnipotent Faculty shall ever draw, from the polluted Treasures of his Memory, any thing Noble, Useful, or Praise-worthy; or that his Name shall ever be Enrolled among those who have Delighted, Instructed, and Honoured their Native Land, and the World at large. "Out of the fulness of "the Heart the Mouth speaketh."

But the Imagination is not only Improvable in point of Vigour and Activity; it likewise admits of Culture, in respect of Regularity and Chaste-

ness. No Faculty is naturally more Irregular and Rambling in its Motions, or Demands more loudly the Controul of a governing Power. Whilst we are Awake, indeed, it is kept within some Bounds by the presence of External Objects, and by the Impressions derived from them, through the Medium of the Senses; but, in a Dream, these Sentinels being off their Guard, we have sufficient Experience of its Eccentric Flights, and its Fantastic Combinations. The first Efforts, too, of Men of Genius, in Works of Imagination, may be compared to the Curvettings of an Unbridled Colt, which Scampers over the Fields, spurning all Constraint, till its Strength is exhausted: nor is it until Experience, with its usual accompaniments of improved Knowledge, and enlightened Taste, has tamed the Impetuosity of Youthful Feeling, that the Faculty, now under consideration, becomes subjected to those regular Movements of Reason, Sensibility, and Passion, to which we owe the many fine Specimens of Poetry, Eloquence, Statuary, and Painting, that adorn the brighter Eras of Civilized Society.

These Facts being admitted, it naturally occurs as a Rational Enquiry, whether there might not be constructed such a Scheme of Discipline, and Instruction, as would Invigorate and Call forth, in Regular and Systematic Exercises, the latent Powers of Imagination? From what has been stated above, it can be no longer doubtful that

many of the first Steps, at least, are within the Reach of a well-adjusted Education; and, at all Events, it cannot be maintained that the Company, Conversation, Books, and Studies, of Young Men are of no avail, in Influencing their general Taste, and in Determining the Bias of Fancy. The Controul and Direction now alluded to, indeed, do not properly come under the Common Forms of Education, which are Calculated for the Improvement of the Reasoning Faculties rather than for that of Imagination: still, this Circumstance by no means precludes the Possibility of arranging such a course of Academical Study as would Extend the means of Culture to the Latter Power of Mind as well as to the Former. Such an attempt is humbly submitted, in the Details to be given in a subsequent part of this Work, respecting the Plan of Instruction, and Discipline, which is regularly followed out, in the first Philosophy Class of this University.

It has been contended, with respect to that Variety of the Faculty of Imagination which the Poet possesses, that it is not Susceptible of Culture, "Poeta nascitur, non fit." This Maxim ought to be understood with some Limitation. We should not readily Admit, that any of the Intellectual Powers, (and the Power of Reproduction is one of them), is incapable of Improvement. From certain Varieties, which no doubt subsist in the Original Constitution of these Powers,

from Early Habits and Particular Associations, the Imagination of some Persons may be more Early Directed to Sensible or to Visible Imagery than to other Trains of Thought—but in all cases, the Imagination, the Active Instrument of Reproduction, is within the Reach of Culture, when applied properly, and at a proper Season. Though it be true that Great Poets are Distinguished by Original Differences of Activity and Strength in their Flights of Imagination; and true, also, on the other hand, that no Degree of Labour, or of Industry, can raise a Weak or Feeble Imagination to the Highest Degree of Poetical Genius; still, it may be maintained that, by Seasonable Culture, this Power can be made Capable of Greater Efforts, and invested with Higher Qualities, than could arise from the mere Natural and Unimproved Endowment.

The Lectures in this Section are brought to a Close, with some Remarks on the happy Effects, resulting from an Improved Imagination, on the Intellectual and Moral Powers of the Human Mind; particularly, as connected with Vivid Anticipations of Futurity; with the Honourable Rewards of Virtuous Industry; and with the Deep Disgrace attending Idleness and Vice. Could the Teacher conduct the Imaginations of his Pupils, with Clearness and Force, into those Distant Periods when they will exhibit the Proofs, and experience the Effects, of a good or bad Edu-

cation;—could he make them see Now, as Clearly as they will see Hereafter, the respective Consequences of Diligence and Perseverance, and of Neglect and Sluggishness, on their Fortunes and Characters in the World;—could he Show them the Attentive and Ambitious Student, whose Example he now recommends to their Imitation, Outstripping them in the Path of Distinction and Credit; realizing the Objects to which they had faintly Aspired—Loved, Admired, andRespected; whilst they pass on, Unnoticed, in the Crowd of Vulgar Characters;—could he bring home such Things to their Imaginations, it is next to impossible but that such Impressions must be Produced, as would Rouse the most Careless to a Hearty and Determined Exertion.

The Account which has just been given of the Peculiar Functions of the Imagination, may serve to correct a mode of Phraseology, not uncommon in Speaking, and even in Writing, upon this Subject. Imagination is sometimes viewed as a Moral Faculty; having applied to it the Epithets of Virtuous, Vicious, Chaste, and Debauched, in reference to the Predominant Sentiments which may happen to be Cherished by different Individuals. It must be very evident, however, that the Application of such Terms to an Intellectual Power, is a gross Abuse of Language; and that it is only to the Passions, and Affections, of the Mind, which constitute not the Contemplative but the Active

Principles of our Nature, that Moral Qualities are to be ascribed. In Reproducing the Notions and Sentiments which accord with the prevailing Character of Individuals, Imagination can only be blamed as an Obedient, Obsequious Slave, equally Ready to Minister to the Sacred Uses of Virtue as to the Unhallowed Demands of Vice. This Criticism may, perhaps, seem Trivial, as being directed against a Popular Manner of Speaking, rather than against any Philosophical Heresy; but, in answer to such an insinuation, it is enough to observe, that nothing can be Unimportant which contributes to Clearness of Conception, and Propriety of Language: and it is unquestionably a very Exceptionable Mode of Procedure to ascribe to One Faculty the results which belong to Another, and to Confound, in the same perplexed Mass of Thought, the Operations of the Imagination, of Attention, of Abstraction, of Generalization, and of Moral Sentiment.

ON THE IMPROVEMENT OF THE POWERS OF JUDGING AND REASONING.

The common Object of these two Faculties is to Discover and Discriminate the Various Relations which subsist among the different Subjects of our Knowledge. The term Judgment is applied when, by Alternate Attention to two Objects in Juxta-po-

sition, the Relation between them is discovered; the term Reasoning is used when that Relation cannot be discovered but by means of a Comparison instituted between each of these two Objects, and One or More Intermediate Ideas, having some Affinity to both. Thus, Reasoning is only an Expedient, adopted by the Mind, for arriving at a Judgment, when the Terms of a Proposition involve some Obscurity; and, accordingly, although it may be a Mark of Superiority in Men, when compared with the lower Animals, it is no less a Proof of his Intellectual Weakness, when compared with Beings of a higher Order. These perceive Intuitively, and without Effort, Truths at which we cannot arrive without the Painful and Tedious Processes of Ratiocination: and we thus find ourselves placed between those who Cannot Reason, and those who do not Require it.

That this important Faculty is susceptible of Cultivation is rendered abundantly Manifest from the degree of Improvement to which it attains, even in those Conditions which seem least Favourable to its Development. In Rude Nations, and in Civilized Communities, too, as far as respects the Mass of Human Beings, no Artificial Means are used to Call forth the Natural Powers of Reason; and yet, we find that, even in such Circumstances, there is a Beginning, a Progress, and, in some Cases, a remarkable Degree of Proficiency, in the use of these Intellectual Endowments. The Child no sooner

receives Sensations and Notions, by means of the External Senses, than he begins to draw Inferences concerning their Objects, and to lay up his Knowledge in the Stores of Memory; and, in proportion as those Faculties are Improved by which we acquire Perceptions and Ideas, so also are the Powers of Inference, and Deduction, gradually Expanded and Invigorated.

It is by minute Attention, therefore, to the Progress of the Reasoning Faculties, in the different Situations in which Man is placed, that we shall most successfully lay the Foundations of an Art of Reasoning; for here, especially, according to Lord Bacon, we must obey Nature; observe her Dictates; and follow the Course which she Prescribes. She, then, imperatively Enjoins that the first Efforts of Art should be directed to the Improvement of those Powers of the Mind by which we form Clear, Just, and Distinct Notions—by which we discriminate Likeness, Difference, and Relation, among the various Subjects of our Knowledge—as being the only solid Basis for an enlightened Deduction. It is, indeed, Impossible to teach Men to Reason until they have been first taught to Know; that is, to form Clear and Accurate Conceptions of the Things about which they are to Reason: and, when the Former Process shall be correctly accomplished, few Rules will be necessary to direct them in the Latter. Thus, in the different Professions and Occupations of Life, we find that Men

Reason, easily and justly, from mere Habit, and without the Assistance of an Artificial Logic; and this, because, from their daily Pursuits, they have previously formed Clear and Distinct Notions, relative to the several Objects about which their Reason is employed.

But, though, by this Natural Logic, as it may be called, the Understanding may be so Improved as to answer all the Practical Purposes of Life, it will frequently happen, in certain cases where Man is called upon to Exercise his Reason, that the Assistance of Art may be extremely Useful. When the Objects presented for the Mind's Cognizance are of an Abstract, General, or Complicated Nature, the Logical Instruments of Definition, Division, and Classification, will be applied with very great Advantage: and, when, in the Comparison of different Subjects, of which the Relations are so Remote or Obscure that they cannot be Discovered but by means of Intermediate Ideas, connected with both Extremes, the Faculty of Reason finds, again, Resources in Art; which, by suggesting certain Positions and Arrangements of Thought, leads the Mind, by Safe and Easy Steps, to the Perception of Truth. We have, accordingly, received, from the Philosophers of Greece, an Art for Improving and Directing the Power of Reason—a System of Rules according to which, in particular cases at least, Comparisons may be fairly Made, and Conclusions justly Deduced.

Before the time of ARISTOTLE, to whom we are indebted for the Art now alluded to, PLATO, and other Philosophers, had been convinced that, to prepare the Human Understanding for the Search of Truth, a certain Process of Training and Systematic Discipline was absolutely Necessary. These great Men, however, confining their Attention to those Faculties of Intellect, by the Operation of which only Sensations and Simple Ideas are produced in the Mind, proceeded no farther than to construct Rules for Definition and Division; whereas, Aristotle, taking a more extended view of the Intellectual Powers, and availing himself of all that had been done by Others, undertook to Communicate an Art calculated, as he fondly hoped, to carry the Powers of Reason to the highest pitch of Perfection. Observing the great Progress which had been made in Geometrical Science, he conceived the project of introducing into the other Branches of Philosophy the Clearness and Certainty by which that Science is Distinguished; without duly adverting, perhaps, to the Essential and Characteristic Differences which subsist between Geometry and almost every other department of Human Investigation.

Of Aristotle's Logic the distinguishing feature is the *Syllogism*, of which he has been generally considered the Inventor; though some Writers, upon very insufficient grounds, have ascribed it to a still more Ancient Philosopher. The Syllo-

gism, as every one knows, is a *sentence expressing a simple Act of Reasoning*—that is, a Comparison of each of Two Objects with a Third or Intermediate Object; and containing, also, an Expression of the Relation subsisting betwixt them, discovered by means of that Comparison. Every Syllogism, it may be remarked, too, consists of Propositions—and Propositions consist of Subjects and Predicates: on which account, it is obvious that, in order to understand the Structure and Laws of Syllogism, it is previously necessary to enter upon the Doctrine of Predicables, and Categories; the Former relating to the Classification of Properties, or the Ideas which are Predicated of Things, the Latter to the Classification of Things themselves, or the Subjects concerning which Predicables are employed. As the Qualities belonging to Objects, Material and Mental, are extremely Numerous, no attempt has been made to Estimate their exact Amount. It has been thought sufficient to form a kind of Classification of Predicables, according to the Extension, or Generality, of the Notion which they imply: but the Categories, or Classes of Things forming the Subjects of Propositions, have been reduced to the Number Ten. The Principle, or Axiom, on which the Conclusion of the Syllogism Depends is, That whatever can be Affirmed or Denied of a General Class, or Kind, may be Affirmed or Denied of all particular Classes contained under it; and the Application of this Principle, in the Construc-

tion of the Syllogism, is, in the First Proposition, to Affirm or Deny something of a Class of Objects; in the Second, to Affirm or Deny that some particular Object is a Member or Part of that Class; from which it necessarily follows that what has been Affirmed or Denied of the Whole, may, in the Conclusion, or Third Proposition, be Affirmed or Denied of that particular Part. But, as the Subjects and Predicates are Terms which may have a Greater or Less Extension, or in which the Extension of One Term may be Contained in Another, it becomes of Importance to give these Terms such a Position, in the Syllogism, as will readily point out the Cases in which one Term, in respect of *Quantity*, is Comprehended in another: and, for this purpose, General Rules are supplied to Determine the Relative Positions of Terms, according to their Extension and Comprehension; and Particular Rules are, in like manner, Constructed, being Accommodated to corresponding Particularities in the Arrangement of the Subject and Predicate. This is the Substance of what is meant by the *Moods* and *Figures* of Syllogism; and, in the Lectures on this part of the Course, Examples are produced, in considerable Variety, to Illustrate the Various Statements now so briefly sketched out, and to render the Whole more Intelligible to the Youthful Student.

Much Ridicule and Contempt has been thrown upon the Syllogism, in Modern Times, by a Class

of Writers who appear completely Ignorant of the Object which its celebrated Author had in View. For example, it is repeated again and again that Syllogistic Reasoning is altogether Ineffectual, as an Instrument for Discovering new Facts in Science, or even for the Acquisition of General Knowledge. But it is very clear that Aristotle never meant it to be an Instrument of Discovery. Is it to be supposed that this Distinguished Philosopher did not Perceive that the First Proposition of a Syllogism always contains a Truth from which the Truth contained in the Second is immediately drawn, and upon which, in Fact, it is necessarily founded; and, consequently, that the Second could never contain more than is contained in the First? He introduced it merely as a Direct and Certain Method of Reasoning, by Three Terms, on Subjects where the Two Things to be Compared, and the Third, with which they are to be compared, could be Expressed in Distinct and Unambiguous Terms: thus Constituting an Excellent Standard whereby to Ascertain the Accuracy of a Complex Argument: for, by Resolving it into Separate Propositions we are enabled at once to Discover the Relation of the Several Parts, and the Connexion of the Whole. In this Analytical Process, the Rules of Syllogism Direct the Logician to find out, in the First Place, what is Asserted, or Denied, in the General Proposition; then to satisfy himself whether the Assertion of the Second Pro-

position is fairly Contained in the First, or General, Proposition: and, lastly, to examine whether the Inference, or Conclusion, Contained in the Last, be a Legitimate and Necessary Deduction from the Comparison of the Ideas instituted in the Two Former Propositions. In this manner, Vague Reasoning, and Inconclusive Arguments, which are Frequently concealed, or rendered obscure, by a Multiplicity of Terms, and an Excessive Copiousness of Language, may be brought to the Test: for the Reader, or Hearer, is thus enabled to Determine both the General Truth upon which the Whole Chain is Suspended, and the Particular Truth which is Contained in every Link of it. It has, accordingly, been reported of the Great Lord Mansfield that, on one occasion, when pleading at the Bar, he was Confounded and Perplexed with an Argument which he was Convinced was False, but of which he could not Detect the Sophistry: and that, upon going home, and throwing the Various Propositions of which it Consisted into the Syllogistic Form, he instantly Discovered where the Fallacy lay. Indeed, it may be safely Asserted that, had not the Merits of the Syllogism been, at one time, greatly Exaggerated, and the Mode of Reasoning had not, founded upon it, been Applied to Subjects for which it was neither Calculated nor Intended, it is very likely that it would still have been considered as a Useful Part of the Art of Reasoning; and, at all events, would have been exempted from that Ungenerous

Ridicule with which it is now almost universally regarded.

The Syllogism is unquestionably founded upon a just Analysis of a Simple Act of Reason; for, in every Comparison which the Judgment makes of Two Things with a Third, in order to Discover a Relation between them, it necessarily forms a Mental Syllogism, whether the Process on which it Rests be expressed in Two Propositions, or in Three. Thus, when I use the following Enthymeme; "The Sky lowers, I shall put on my "Coat," the Mind passes Rapidly from a Comparison of the Present State of the Atmosphere to the Recollection of Similar Appearances, on a former occasion, when Rain actually fell—and then, from the fall of Rain, Associated with these Appearances, it goes on to something which was done in Consequence of that Event, on the occasion alluded to. In this respect, the Manner of Expressing the Inference Drawn by the Mind, although it does not strictly Coincide with that employed by the Mathematician, implies the very same Train of Thought; the only Difference is, that, before he can Pronounce the Line A Equal to the Line B, because both these Lines are Equal to a Third Line C, he must bring forward all the Three Terms, and Incorporate them into Three Separate Propositions, constituting a Regular Syllogism.

In this part of the Lectures, an Abridged Narrative is introduced of the Reception given to the Syllogism in Ancient and Modern Times—the Causes of the Universal Admiration conferred upon it at One Period, and of the Neglect into which it fell at Another—the Discovery of its Imperfections and Defects; and the Substitution, in its place, of the Inductive Mode of Reasoning—together with some Remarks on Certain Plans of Reform in the Art of Logic, proposed by some Philosophers of the Present Day. These Subjects admit of Useful Detail, and lead to many interesting Anecdotes; and they are Subjoined to this Part of the Course, not only for promoting the General Information of the Student, but, more particularly, with the View of Encouraging Speculation and Enquiry, and also of supplying him with Suitable Materials for Conducting the Practical Portion of his Business, as Assigned to him by the Established Discipline of this Class.

It does not appear, (and it is a Fact worthy of Attention,) that, at any Period of the Greek Philosophy, subsequent to the Age of Aristotle himself, the Syllogism was much used in Reasoning, whether in Physical Science, or in that of Mind. Indeed, the Term is scarcely to be found in any other Greek Author; whilst the Syllogistic Mode of Argument does not seem to have been employed even by the Philosopher himself, with whose Name it is so closely Associated, in any of his Writ-

ings, except in the Analytics. An Accident, formerly mentioned in this Work, which happened to the Manuscripts of Aristotle, soon after his Death, had nearly Buried them in Endless Oblivion. After this, they fell first into the hands of Theophrastus, his immediate Successor, who bequeathed them to one Nileus his heir. The latter, proud of possessing such a Treasure, and afraid lest the Precious Deposit should be seized by the King of Pergamus, who, it is said, was then Collecting Manuscripts for the Alexandrian Library, concealed them in a Cellar, at Scepsis, where they lay for more than a Hundred Years. Rescued from this Cellar, after having sustained, as may readily be imagined, no Slight Degree of Damage, they were purchased by a Disciple of the Peripatetic School, and transmitted once more to Athens; where they were Subjected to such a Variety of Corrections, Amendments, and, probably, Interpolations, as have injured them, it is feared, to a still Greater Extent then the Damp Walls of Scepsis. After enjoying an Asylum, during Several Ages, at that Celebrated City, the Aristotelian Manuscripts were carried to Rome, by the Dictator Sylla, the Conqueror of Greece: and to this Event we may ascribe the Rapid Progress which the Peripatetic Doctrines made among the Latin Philosophers, during the Reigns of the First Emperors, and their Subsequent Triumph over the Opinions of Plato, so long Admired by the Sages of the Western

World, and so much in Unison with the Heroic Character of Romans.

It is not proper to neglect this occasion of remarking the Strange and Unexpected Vicissitudes in Human Affairs. When the MSS. of Aristotle were brought out of the Cellar at Scepsis, where, it is said, they had lain One Hundred and Thirty Years, amidst Dust and Vermin, who would have supposed that they would, One Day, Engross the Attention of a Great Part of the Civilized World, become the Principal Study of all Men of Learning, the Great Object of a Learned Education, and the Means also of Raising their Author to a Higher Pinnacle of Literary Fame, than any Man, either before or since his Time, has enjoyed, of procuring for him, too, an Absolute Despotism of Opinion for the space of nearly Two Thousand Years? An Event so Singular, and certainly so unexpected on the part of Aristotle or his immediate Disciples, shows how Imperfect our Knowledge is of the Secret Causes and Combinations which Silently, but Certainly, bring about the most Important Revolutions in Human Affairs.

The Philosophy of Greece being thus transferred to Rome, it would be a Subject of much Curiosity and Interest to trace the Progress of Opinion among the Inhabitants of the latter, as modified by the Views of their more Enlightened Neighbours. We learn, indeed, from an Incident

mentioned by Cicero, that, in his Time, the Reputation of Aristotle, as a Philosopher, was very little known in the Capital of Italy. Trebatius, a Friend of the Orator, found him one day in his Library; and, observing a Book entitled "De "Locis," asked him who was the Author of it? Cicero answered that one Aristotle, a Greek Philosopher, was the Author; and that it was a Book which deserved to be better Known. This Anecdote affords a Proof, at once, of the Slow Progress of Aristotle's Fame, in the Last Age of the Republic, and also of the Correct Opinion which Cicero, individually, had formed of his Character.

In the Lectures, an Account is here Introduced of the Various Causes which first drew the Attention of the Scholastic Philosophers to the works of Aristotle, and which Contributed so much to Create that Authority for his Opinions, and Veneration for his Character, which, prior to the Revival of Learning in Europe, had raised him almost to the Rank of a Divinity. I mention, too, although in a still more abridged form, the Efforts which were made by some Foreign Philosophers, particularly Ramus, Descartes, and Leibnitz, to introduce into Science a New Method of Investigation. In this Retrospect, we find that, in some Countries, and especially in France, it required more than the Strength of Reason, and a Conviction of Utility, to pull Down the Syllogistic Fa-

bric which had been so long established: for the Aristotelians, Conscious of Weakness, and perceiving, every where around them, Symptoms of a Rapid Decline, threw themselves upon the Protection of the State, and were but too Successful in Engaging the Strong Arm of Secular Power, to put Down and Overwhelm their Antagonists. In this Crisis of Affairs, so likely to prove Decisive against the Cause of Philosophy, Boileau, the celebrated Satirical Poet, came forward with the Powerful Weapons of Ridicule and Derision, in Support of Science, Reason, and Common Sense. Whilst the Advocates for the Old School were endeavouring to Secure, in their Interests, the Authority of the Parliament of Paris, Boileau published a Mock Petition, in the Name of the Professors and Students of the Universities of that City, Craving an Interdict of the Court against Two Strangers, Reason and Experience, who had Endeavoured to Shake off the Yoke of the said Aristotle, and to Banish from the Schools his Formalities, Entities, Identities, Virtualities, Velleities, &c. This Petition, Executed with Infinite Humour, was followed by a favourable Edict, supposed to be pronounced by the Court, and expressed in the formal Style of such Deeds, re-establishing Aristotle in the Full and Peaceable Possession of all his Rights and Privileges in the Schools; and subjecting the Factious Vagabonds, Reason and Experience, to Fine, Imprisonment, &c. &c.

This Piece of Pleasantry, which was Read by every one, did Material Service to the Cause of Philosophy and Common Sense, and found its way to the Root of those Prejudices which Sober Argument had in vain Endeavoured to Assail. The Doctrines of the Reformers, accordingly, were every where seen gaining ground; whilst the Props of the Aristotelian System fell, one after another, leaving the Magnificent Fabric to Tumble by its own Weight.

The Principal Attack, in Britain, upon the Doctrines of the Schools, was made by Lord Bacon, so justly celebrated for his Grand and Philosophic Views, and for the Complete Success which has Crowned his Undertaking. This Distinguished Writer far surpassed, in Knowledge and Sagacity, those Continental Philosophers who first lifted their heads against the Ancient Logic; and, accordingly, he succeeded where they had failed, and not only levelled with the ground the Stately Edifice upon which they had commenced the Assault, but, what was incomparably more difficult, he erected in its stead a Building at once more Noble and more Durable.

In this part of the Historical Sketch, of which I now present the mere Outlines, an Attempt is made to communicate to the Students the Train of Thought which occupied the Mind of that great Man, and to point out to them the Cautious

and Gradual Steps by which he proceeded from the Beginning to the happy Conclusion of his Mighty Project. They are conducted to the Starting Post, as it were, from which Lord Bacon set out; they travel along by the Side of the Learned and Judicious Philosopher; they enter into his Secret Resolves and Purposes; and follow him, with increasing Interest and Delight, in every subsequent Stage of his Progress, and through every Scene of his Manifold Triumphs. No Exercise can be imagined more Conducive to the Improvement of Young Minds. The Gradual Disclosure of his Great Plan tends to Enlarge and to Enlighten their Understandings; his Method of Philosophizing is the Best Example to guide them in Similar Investigations; and the Brilliant Success which attended his Labours is calculated at once to Excite and Encourage them to Prosecute their Studies with Perseverance and Alacrity.

It was Natural for such a Mind as that of Lord Bacon, well acquainted not only with Ancient Literature, but with the Learning and Philosophy of his own Country, to be deeply struck with the Survey which he had instituted, of their Origin and Progress, Compared with the actual Condition in which he found them. From the Period of the Greek Philosophy, down to his own time, he perceived that, instead of Advancing to Higher Degrees of Perfection, the Doctrines of

both Greek and Roman Philosophers had been corrupted and disfigured by the Ignorance, or Superstition, of every Succeeding Age; and that even the Ancient Languages themselves were almost entirely lost, or very generally neglected. No Discovery in Science, no Invention in the Arts, and no Addition to the Stock of Economical Knowledge, graced the Annals of that lengthened period. Not satisfied, however, with the general Conviction, arising from these Facts, that the Method of Inquiry followed by the School Philosophers was Radically Defective, he resolved to institute a still more Minute Survey into the actual condition of Science, and of Art, with the View of Ascertaining the Exact Point to which each of them had been carried—to mark their Imperfections, or Inaccuracies—and, above all, to Separate the Things which Philosophers had Explained from those which they had either not attempted to Explain, or had failed in the Attempt. And to secure, for the future, a greater share of Success, by establishing a more Rational Method of Investigation, he endeavoured to penetrate into the Remotest Sources of Error, and to guard the Student against the Natural Biasses of the Mind, as well as against those which have their Origin in Education, Custom, or Authority.

Having ascertained that no Material Progress had been made in any Department of Human

Knowledge, during the Lapse of many Centuries —that the Seeds which had sprung up and looked so vigorous, in the Philosophical Ages of Greece and Rome, had never arrived at Maturity—and being satisfied, at the same time, that this Want of Success did not arise from any Defect in the Genius, or Talents, of the Scholastic Authors; (there being, even in their Errors and perverse Mode of Investigation, abundant proofs both of Acuteness and Perseverance;) he concluded that the Unpromising Condition of Science was altogether to be Ascribed to an Unnatural System of Philosophizing, Encouraged by the Spirit, and Temper, and Pursuits, of those Bigotted Times. Fixing, in this manner, upon the Ultimate Cause of the Effect which he had taken into consideration, and viewing more closely the Unwieldy Instrument of Inquiry then in general Use, in connexion with all its Properties and Imperfections, he boldly pronounced this memorable sentence: That the Ancient Instrument of Science was altogether incapable of Amendment or Improvement; that no Partial Helps or Specifics could be of any Use; and that no Effort of Human Skill could ever render it fit for promoting the Discovery of Truth, or for furthering Useful Inventions. He found, in short, that Aristotle, in the very First Step which he took in the Formation of the Syllogism, had confined his Method of Reasoning to Abstract and General Truths—that he had set out with a General Proposition, containing in

it, of course, the Particular Truth which was afterwards to be Evolved by the Structure of the Syllogism; and that, consequently, his Instrument of Investigation could never be Applied to the Discovery of Truth, by a Regular Deduction from Facts, from Experience, Analogy, Probability, or Testimony. He maintained that the Natural Access to Science was Obstructed by the very Means appointed for its Cultivation; and that, as Particulars precede Generals, in the Order of Observation and Experience, what was then placed First ought to be placed Last, in the order of Scientific Inquiry.

Freed from the Trammels of the Ancient Philosophy, and Anticipating, with Steady View, a more Enlightened Condition of Science and of Art, he assured Mankind of complete Success in all their Endeavours, provided they would relinquish the Absurd System of following out their Inquiries by Means of an Artificial Logic, and adopt the Plain, Natural, Method of Investigation which all Men, except Philosophers, had, at all times, made use of, in their Pursuits of every Description. He declared, however, at the same time, that the Natural Method which he recommended was altogether Incompatible with the slightest adherence to the Syllogistic Logic, as an Instrument of Science; and that, to render the Reformation Available to the Purposes of Genuine Philosophy, it must be Radical and Com-

plete. "Frustra expectatur," says he, "Augmen-
"tum in Scientiis ex Superinductione Novorum
"supra Vetera. Instauratio facienda est ab imis fun-
"damentis, nisi perpetuo circumvehis cum exili et
"quasi contemnendo progressu." He hoped, by the Aid of Experience, founded on Observation, and Guided by Judgment, to change entirely the State of Philosophy, and to teach Mankind one Art which would Minister to the Improvement of all others.

ON THE BACONIAN METHOD OF INDUCTION.

Although the Method of Prosecuting Philosophical Inquiry, by means of Induction, has been generally associated with the name of Bacon, it is not to be understood that he is the Author or Inventor of that Method. No Man ever taught another his first Inductions. It is a Mode of Inference which the Human Being is prompted to make, by the very Constitution of his Mind; which regulates his Procedure in the ordinary Affairs of Life; and which would have guided him, with equal Steadiness, in the Department of Science, and general Reasoning, had he been allowed to listen to the Dictates of Nature. It was only in bringing back Man to his Natural, Unsophisticated, Condition, as an Intellectual Creature, that Bacon introduced the Inductive Method into Philosophy.

Nor is it to be imagined that Aristotle was ignorant of Induction, because he did not admit it into his Analytics. On the contrary, he exhibits, in many parts of his Multifarious Works, the most satisfactory Evidence that, whilst he employed his leisure in constructing an Artificial System for others, he himself followed the simpler Process of Nature; and, in his Politics, for example, he endeavours to establish the principles of good Government on an Induction, or, more properly, perhaps, an Enumeration of Particular Facts, drawn from the consideration of certain Forms of Government which had actually existed.

The young Student may require to be informed that a mere enumeration of Facts is to be carefully distinguished from an Induction. An Inference drawn from an Enumeration can extend no farther than to the Particulars Enumerated; as the sum total in Addition is neither More nor Less than the amount of the Units contained in it. An Induction, on the contrary, always implies the Discovery of a Principle, as well as the Knowledge of particular Facts; and every Inference grounded upon an Inductive Process is, when technically expressed, the Enunciation of a Law of Nature. It is, in short, a general Truth, derived from the Consideration of common Properties in Individual Facts.

In this part of the Lectures, an Analysis is given,

and fully illustrated, of the Inductive Process according to the views of Lord Bacon. It sets out upon the Principles, already in some degree explained, viz. that, when we observe, in many Individual Substances, the same Properties and Powers, we ascribe these Properties and Powers to the whole Class of which the Individuals observed constitute a Part. For instance, it has been found, upon trial, that This, and That, and many Different Bodies, Gravitate to the Earth; hence, it is concluded, although Experiments have been made on comparatively very few Members of the numerous Varieties of Substances, that *all* Bodies gravitate to the Earth. By a similar process, too, upon observing that Lead sinks in Water, and Cork swims on its Surface, we arrive at a Second Induction, or Law of Nature, relative to Gravitation, as being regulated, to a certain extent, by the Specific Weight of the Gravitating Body, compared with the Density of the Medium through which it descends. It is, also, upon a Principle strictly analogous, although somewhat Different in its Origin, that we believe that the Sun will rise to-morrow, and that the Tides in the Ocean will continue to Ebb and Flow, in all time coming, as they have hitherto Ebbed and Flowed: for, when such Expectations are fulfilled, in an indefinite number of Instances, they are immediately succeeded by complete Assurance, or absolute Certainty, founded upon a firm Conviction, that the Laws of Nature will continue to act, Hereafter, as they have all along acted, since the Beginning of the World.

A Description is likewise introduced here of the Cautious and Vigilant Character of the Baconian Philosophy—the severe Maxims upon which Experiments are to be conducted—the Number of Trials—the Exact or Imperfect Similarity of Cases—and, above all, the watchful Scrutiny into Contradictory Instances, and False Appearances. A full Account is also given, in this Part of the Lectures, of what Lord Bacon calls his *Ascending* and *Descending Scales.* By the Former of these Processes, as might be conjectured, the Mind advances from Particulars to the next more General Step, and proceeds again, in the same way, to others still more general; till, by a Series of progressive Movements, it arrives at the most General Conclusion, or Law of Nature. In the order of the Descending Scale, the Mind sets out in possession of these Laws of Nature, or general Doctrines; and, thereafter, applies them, with the Characteristic Caution and Reserve of the Baconian School, to the Explanation of particular Phenomena.

It naturally occurs, at this stage of the Narrative, to inform the junior Student, that the Mistakes into which Men have fallen, in the prosecution of the Inductive Method, are to be ascribed not to this Mode of Reasoning, but to the Reasoners themselves; and, particularly, to their Neglect of the several Marks whereby a Perfect is to be distinguished from an Imperfect Induction. They have persisted in overlooking minute Differences,

in Cases apparently similar; or they may have drawn a General Conclusion from too Small a number of Instances, seizing upon a Principle not sufficiently established by decisive Experiments. Hence, it has come to pass that more false Theories, and dangerous Notions, have arisen from hasty Inductions, than could ever be imputed to the use of Syllogism. Omens, Prodigies, Lucky and Unlucky Days, of which we read so much in Ancient History, are all to be traced to hasty Inferences, from Facts not inquired into, or not clearly understood; as are also those Mystical Associations which subsist in the Minds of most Men, between the Occurrence of one Event and the Expectation of another; which ages of Knowledge, and the most enlightened Education, have not been able completely to dissolve.

Such is the Baconian Instrument of Science, as described in that Author's Works *De Augmentis Scientiarum*, and *Novum Organum:* and no plan of Study, certainly, was ever more fully justified by Success. It is truly surprising how Soon, and how Widely, the Spirit of his Philosophy pervaded every Department of Science. The Student of Nature, at once, forsook the Ancient Method of Philosophizing, and eagerly followed the Directions of Bacon, in investigating the Laws of the Material World. Previous to this Epoch, Natural Philosophers undertook to explain all the Phenomena which presented themselves in the

Heavens and the Earth, upon mere Hypothesis and Conjecture; and, when they had succeeded in Moulding these Conjectures into something like a System, supported by a few plausible Appearances, they imagined that they had penetrated into the inmost Recesses of Nature, and disclosed her most Secret Contrivances. Descartes, for Example, observing, as he himself informs us, that Chaff is carried round in a Vessel full of Water, and passively yields to the Fluid in which it is supported, concluded that the Revolution of the Heavenly Bodies, in their Orbits, was a case precisely similar—that they, too, were carried round in a Fluid of a peculiar Quality:—and, then, as was to be expected from his fertile Genius, he created for them a Medium wherein they might eternally float, and gave to them a degree of Motion, corresponding to the Times and Periods of their respective Circuits. But, what appears still more wonderful, this most absurd and ridiculous Imagination of Descartes was received, with Respect and Admiration, by the Philosophers of that Age; and even continued, during no small portion of Time, to divide the Opinions of the Learned, with the Theory of Attraction so admirably unfolded by Newton. As well might we listen to the Conjectures of a Child, relative to the Construction and Equipment of a Man-of-War, as to a Philosopher who was guided solely by his Fancy; and yet this egregious Trifling, under the Cloak of Science, which makes us

Blush so often for the Weakness and Presumption of the Human Race, might have continued until our own Times, had not a New Method been devised of interpreting the Laws of Nature.

Among the many happy Effects resulting from the Reform introduced by Lord Bacon, may be mentioned the Encouragement which was thus held out to Men, in every Country, and every Condition of Life, to enter upon the Study of Nature; and, by Observing, Comparing, and Recording Facts, to contribute their share to the common stock of Knowledge. Philosophy was now brought down to the Level of the most Ordinary Abilities, and was Prosecuted according to the Natural Conceptions of Mankind. A New and Easy Path was opened up, in which not only the Learned, but the Studious and Inquisitive in every Rank of Society, might Walk with Safety and Success. It was soon after his Time, accordingly, that the Republic of Letters, properly so called, received its Establishment, and was endowed with the true Riches of Genius and Freedom. Societies were formed for the express purpose of Collecting and Circulating Knowledge. Kings and Princes encouraged the rising Spirit of Industry and Research. Theory and Experiment, Speculation and Practice, went hand in hand; and a reasonable prospect was now entertained of Uniting the Labours and Genius of all the Nations on the face of the Earth, in Promoting the interests

of Science. Never could it be more truly said than now, that "Wisdom was justified of her children:" for, soon after this great Luminary appeared, a band of Ingenious Men arose, who made the most striking Discoveries in Natural Philosophy. "Torricelli announced the Pressure of the Atmos-"phere: Harvey discovered the Circulation of "the Blood: Huygens perfected the Telescope; "and applied the Pendulum to Clocks. Leuen-"hœck, by his Microscope, laid open a New "World which had formerly been concealed. Boyle "engaged in his Physical Experiments. Halley "attempted a Theory of the Comets. Bradley "subjected to Regular Laws the Aberrations of "the Fixed Stars. The great Newton Analysed "the Rays of Light, and Taught the Gravitation "of Worlds."

Though Lord Bacon directed the Application of the Inductive Method of Reasoning chiefly to the Discovery of the Laws of the Material World, it may, notwithstanding, be also applied, in its leading Principles, at least, to Investigate the Properties and Laws of Mind. It is true that Experiments, literally of the same kind with those to which Matter is subjected, cannot be made upon the Thinking Substance; but no one will deny that Experiments, equally well Adapted to the Nature of Mind, may be Contrived, and Executed, with Success. Thoughts and Feelings cannot be treated with a Menstruum, nor can Opinions be

Decomposed, or Prejudices be got rid of, by any known Process of Dissipation. It is not, therefore, in the Gross and Common Acceptation of the Term that the Pneumatologist speaks of Experiments on Mind. The Object, however, which he keeps in view is strictly Analogous to that of the Astronomer or Chemist:—viz. a faithful Interpretation of the Laws of Nature. The Facts upon which he proceeds may, perhaps, be more closely connected with Observation than with any Actual Trial or Experiment; and it would be extremely Nugatory to dispute about the use of a Word, when applied to things so Essentially different as Matter and Mind. The Knowledge obtained, in either case, is the result of Attention, Comparison, and sound Reasoning, founded upon a careful examination of Facts: and, in this, more than in Actual Manipulation, consists, it is presumed, the true Spirit of the Baconian Philosophy. Observation and Consciousness are, indeed, the only Instruments which the Mental Philosopher can employ, in Collecting the Facts, and Tracing the Operations, connected with the Intellectual and Moral Faculties of the Human Being; but these he can use in all Places, and in all Circumstances, by Night as well as by Day, on the Mountain, or in the Valley, in Society, or in Solitude, in the Company of Wise Men, and even in the Company of Fools.

In truth, although Lord Bacon, as has been already observed, applied his Method of Induction

chiefly to Natural Science, the Spirit of his Philosophy was soon, likewise, extended to the Study of Mind. Mr. Locke, in his Essay on the Human Understanding, trode exactly in the Path which Lord Bacon had pointed out; and as he was the first who attempted an Analysis of the Mental Powers, uninfluenced by the love of Hypothesis, his Work may be regarded as a real History of Thought and Feeling; whereas, all Former Treatises could be considered in no other light than in that of Pneumatological Romances. It is true, indeed, that neither Locke nor any one of the great Philosophers who have succeeded him in this Department, viz. Hutcheson, Hume, Smith, and Reid, has left any System or Treatise on the Art of Reasoning, as peculiarly applicable to Mental Inquiries; but their Works contain some excellent Specimens of the Baconian Logic, on Intellectual and Ethical Subjects, and prove, by their successful use both of Analysis and Synthesis, that this Mode of Investigation may be profitably pursued in the Philosophy of Mind, as well as in that of Body. The Volumes of Hume, for example, making allowance for a little artful Ingenuity, sometimes resorted to by him, in answering objections, present the most perfect Specimens of close Reasoning and Logical Deduction: but no one of the great Men now mentioned, has shown himself a more intelligent, or more faithful Scholar of Bacon, than the late venerable Dr Reid. To uncommon Candour and genuine Simplicity,

this celebrated Philosopher added an Absolute Command of his Attention, great Powers of Discernment, and an indefatigable Industry, uniformly directed by the love of Truth. No other Writer has so well Delineated the Method of Studying Mind; and no one has treated Metaphysical Subjects with so much Propriety and Clearness. But, on this particular Topic, the Author of these Remarks may, not without some justice, be charged with Partiality. He studied under him as a Professor; and, during the last Twenty Years of his life, lived with him in the most perfect Habits of Friendship and Familiarity; enjoying, thus, the Happiness of such Frequent and Unreserved Communication, as to make it now extremely difficult to distinguish Thoughts and Sentiments suggested by that excellent Author from those which may have been derived from other Sources.

Considering the Nature of the Reformation brought about by Lord Bacon, and viewing it, as it ought to be viewed, in the light of a simple Return to the Principles of unsophisticated Reason, it was not to be expected that any Material Addition to the Rules of Investigation, considered as an Art, could be made, either by his immediate Successors, or by more Modern Philosophers. The *Novum Organum* Professed to Accomplish little more, than to Induce Men to Reason on Philosophical Subjects, as they are accustomed to Reason

in the Ordinary Affairs of Life; to Rescue them, in short, from the Dominion of Art, and to restore them to the Clear Light, and Unfettered Liberty, of Nature. It is, however, made a Subject of Complaint by several distinguished Writers, both at home and abroad, that a Philosophical or Rational System of Logic, embracing every thing which ought to be Comprehended in such an Art, is still a *Desideratum* in Science. De Gerando, a French Philosopher of Great Eminence, for instance, lamenting the manifold Imperfections of all former Attempts, has suggested a very comprehensive Plan, which he describes with much minuteness: constituting, according to his views, a System of Logic, Solid in its Principles, Practical in its Precepts, Satisfying every Demand, Preventing all Doubts, Embracing every Form of Argument, Directing all Methods, and Accompanying the Mind in all its Operations. This Rational System of Logic he divides into Six Parts. He proposes, in the First Division, to begin with an Analysis of the Operations of the Mind—of the Faculties employed in these Operations, whether in their Simple or Combined State—or, in other words, to give the History of the Formation of Thought in every Individual. The Second Part comprehends an Enumeration, and Classification, of the Precepts which ought to Direct Mankind in their Reasonings on Speculative Subjects, and includes, at the same time, a great portion of the Ancient Dialectics, together with the Application

of the Modern Analysis to the Solution of Abstract Questions. The Third Division contains what may be called the Logic of Facts; which is thus made to follow the Explanation, and Establishment, of the Principles upon which Men Judge and Reason about Things. Here, too, are unfolded the Rules of Four very Important Arts—the Art of Observing—the Art of making Experiments—the Art of Generalizing—and the Art of Anticipation, or Conjecturing. The Fourth Division is dedicated to the Fixing, or Determining, the Import of those Signs which distinguish Truth from Error—the Different Degrees of Probability—the Origin of Error and Prejudice—and the Remedies or Means of Preventing them. The Fifth Division treats of Method—the various Kinds of it—the Uses of Method—the Means of Improving it—and its Application to the different Branches of Science. The Sixth and Last Division comprehends the Practical Rules which he recommends for Improving the Mind generally—for Cultivating the Senses, Memory, Attention, Imagination, and, above all, the Inventive Faculty, upon the wise Direction of which the Progress of Science and of Art so essentially depend.

To this Rational and Comprehensive Logic, the Author further adds, a Series of Remarks on its Application to the General Knowledge of Men—to Prudence in the Conduct of Life—to the Art of Conversation and Discussion—to that of Read-

ing with Advantage—to Grammar, Criticism, and Eloquence;—and to an Art which embraces all others—the Art of Meditation.

This plan of a Reformed Logic is, without doubt, sufficiently Comprehensive; embracing every thing, either in Point of Precept, or the Order of Study, which could possibly be required to Conduct the Intellectual Powers of Man, in the pursuit or Application of Scientific Truth. It might, indeed, be considered as an *Encyclopedia* of Logic; affording to the Student not only the proper degree of Direction, in his several Researches connected with the Principles of just Reasoning, but the actual Knowledge, too, which it is the Ultimate Object of such Reasoning to Attain. It is a Work, however, which is not to be expected from the Labours of any Individual: the Genius requisite for the Execution of Some Parts, being hardly Compatible with the Minute Details and Common-place remarks indispensable in Other parts. But, supposing it Executed in the most Complete Manner imaginable, exhibiting a degree of Knowledge, Genius, and Experience never before united in any Single Composition, I doubt much whether it would, after all, preclude the Ground of Complaint, mentioned above, of Defects and Imperfections in the Art of Reasoning. For, although the Materials of such a Plan of Logic may never have been Combined in any one Treatise, yet all the Principles and Maxims, which it was meant to Incorporate, are to be found in

different Works, well known to Men of Letters, and accessible to every Student. ARISTOTLE, for example, Two Thousand Years ago, taught the Manner of Forming Clear and Distinct Notions, by Rules of Definition, Division, and Classification: and these Rules have been Recommended by almost all succeeding Philosophers, who have seen no reason either to alter them, or to add to their number. Descartes, too, in his Work on Method, has set forth many sound and practical Rules for general Reasoning and Investigation. Lord Bacon has taught men how, by a well regulated Induction, they may interpret the Laws of Nature; disclosing, at the same time, the Sources of those Numerous Prejudices and Predilections of the Human Mind which have the greatest Influence in perverting its Judgments. Locke has delineated, with a masterly hand, the Faculties of the Soul; pointed out the Limits and Extent of Human Knowledge; detected the Prevailing Abuses of Language, as applied to the Functions of the Reasoning Powers; and recommended the proper Helps and Remedies to Guide the Understanding, or to Correct its Aberrations. Hutcheson, Hume, Reid, and Stewart, in more modern times, have presented, in their respective Publications, many fine instances of Successful Investigation and of Legitimate Reasoning; so that, as far as Rule and Example are considered, the zealous Student has no Reason to bewail the Absence of Means for Constructing a System of Rational Logic. There are no Difficulties which

can occur, or Obstacles that can come in his way, which he is not Instructed by Precept, or by the Actual Success of others, to Explain or Remove. Still, were these Helps greater than they are, and were the Specimens of Philosophical Investigation and Sound Argument which are presented in the works of Modern Authors, more Perfect than I have described them; I apprehend that the Desideratum, so often alluded to, of a Rational, Systematic Logic, would continue to be as much required as ever, so long at least as the present Method of teaching Philosophy shall remain Unchanged. After the memorable Exertions of Aristotle, Bacon, and Locke, to Improve the Instruments of Thought and Reason, we must ascribe the complaints, which reach our ears, of Defect and Failure, to a very different Cause from want of Scientific Precept, or of Luminous Example.

The Truth is, that the Art of Reasoning, like all other Arts, can only be Acquired by Habit; not by the mere Knowledge of Speculative Rules. Ten Thousand Treatises might be written on the Arts of Spinning and Weaving, and the Rules contained in them might be fully understood, whilst yet neither Yarn nor Webs would be Produced, to honour the ingenious Author. In learning the Art of Reasoning, accordingly, the Young Artist must submit to be Instructed and Exercised, in a manner not less Practical than the Apprentice to a Common Trade. He must be

subjected to Authority and Discipline: compelled to Exert his Talents in General; and particularly those which respect the Perception of Truth, and the Relations of Things: and, these Elementary Steps once taken, and persevered in, it will be easy for him to Direct the Faculty of Reason to whatever subject may be brought before his Mind, without any immediate Reliance upon Abstract Doctrines of Logic, or Theories of Reasoning.

The Perfect Plan of a Logical System sketched out by De Gerando, Learned and Comprehensive as it may be, is not at all calculated for the purposes of a First Philosophy Class. It sets out, as was observed, with Speculative and Abstract Knowledge of Mind; with a Review of the Ancient Dialectics; and an Application of the Modern Analysis to the more Abstruse questions of Metaphysical Science: whereas, if we allow ourselves to be guided by the Natural Developement of the Rational Faculties themselves, we shall find that the Third Division ought to be placed First; and only that species of Knowledge communicated, at this early stage, which directs to the Culture of Attention, Observation, and the Habit of Arranging Simple Facts. The First Step towards good Reasoning consists in taking Clear Views of the Subjects concerning which the Determination of the Mind is to be made; and, in order to invest the Perceptive Powers with this invaluable Habit, it is absolutely necessary, in the very commence-

ment of a Philosophical Education, to cultivate, by means of Regular Exercise, the Faculties of Attention and Observation.

The chief Improvement in Logic, therefore, which I can anticipate, or which, indeed, seems at all Practicable, will arise from the Manner of Teaching it; not, as at present, by mere Speculation on the Nature of Mind, and by Abstract Precepts founded upon Doctrines not well understood; but by a Constant and Regular Exercise of the several Faculties which are employed in Logical Deductions, on Subjects selected and explained by the Teacher for that express purpose. There is no other way of teaching Young Men a True and Rational Logic, except that of Inducing them to Think and Reason; and, to render Education Effectual for these Important Ends, he who conducts it must have the Means of Exciting Industry in all his Pupils, of Assisting the Willing, Encouraging the Irresolute, Directing the Ignorant, Compelling the Refractory, and of Rewarding the Successful. When the Exertions of the Students are Optional, they will neither be Constant nor Uniform; and, indeed, we might as well look for Effects without Causes, in the Material World, as for Activity and Diligence in Youthful Minds, without a Concurrence of Motives derived from the Discipline of the School, the Authority of the Teacher, and from the Feelings of Emulation which he may have succeeded in Awakening. *Professors* of Universities may be well Employed,

whilst Exercising their Genius, and Employing their Leisure, in Attempts to enlarge the Boundaries of Science, or to Extend its Usefulness; but *Teachers* in Universities must Condescend to act an Humbler Part. They must submit to Constant and Painful Labour; directing their Zeal and Talents to the Means of Cultivating Endowments of which the Pupil hardly knows he is possessed; of fixing Attention upon Subjects little calculated to Arrest the Juvenile Imagination; and of Drawing forth Regular Efforts, where there are so many Temptations to Remissness. It is in vain, therefore, to complain of Defects in the Art of Logic. The Defect is in the Art of Teaching—a Defect for which no Artificial System of Reasoning can, in the smallest degree, Compensate—inasmuch as no degree of Genius, no Extent of Resources, on the part of the Teacher, can make up for his Unskilfulness, or for his Negligence, in not producing Regular, Animated, and Increasing Exertions, on the part of the Student. It must, however, be admitted that, in all the Departments of Science, and of Business, many Persons have attained to High and Exalted Exercises of the reasoning powers, without having gone through the Discipline of a Logic Class. But such persons must have gone through a Similar or Analagous course, either under their own, or some other, Private Direction. Some may be favoured with stronger Powers of Intellect than Others; or may have been placed in more Favourable Circumstances; but no man ever acquired the Habit of Reasoning

well, on any Subject, except by Reasoning Frequently and Regularly.

ON THE IMPROVEMENT OF THE POWERS OF GENIUS.

In the Analysis of the Intellectual Powers, given in the First Division of the Lectures, Genius was described as consisting in a Happy Combination of these Powers; excited strongly by a particular Object, and Concentrated towards the Attainment of some particular End. It is an Endowment, indeed, not to be Traced to any one Faculty, nor to be Defined by a Reference to any single Operation; it is most easily Characterized by its Splendid Effects, whether in Science or in Art. Agreeably to this view, it is farther stated, in the Analysis already mentioned, that Invention in the Arts, and Discovery in the Sciences, are usually held as the last *Criteria* of Genius; and an attempt is made to Trace a Connection between such Achievements of Ingenious Men, and certain Combinations of the Intellectual Faculties, Imagination, Judgment, and Taste, which are commonly supposed to Constitute the Basis of the Power in question. The Analysis of Genius is Concluded with some Remarks on the Early Indications of its Workings; with the view of Attracting the Attention, and Rousing the Diligence, of Youth, to the Means of Calling forth its Dormant Energies.

It is not pretended that there is any Art, the Direct Object of which is to Teach Men to Invent or Discover. Nothing more is meant than that Rules may be of Use in Performing certain Mental Acts, and in Acquiring Particular Habits, upon which the Last Step in a Discovery or Invention may materially Depend. In truth, as Genius is universally regarded as springing from a Peculiar Combination of the Intellectual Faculties, so, the more perfectly these Faculties are Cultivated by the due Application of the Means Appropriated to each, the more likely are we to Succeed in Developing the Latent Powers of Genius, properly so called, and in Strengthening their Operation. If, on the contrary, the First Steps are Neglected, and the First Rules Despised, the Native Talents of the Youthful Genius will either remain Languid and Unimproved, or they will shoot forth into all the Wildness and Extravagance which usually characterize Strong Powers, and Bad Taste, in Young Men.

Although it has just been remarked that there are no Rules or Lessons whereby Man can be instructed to Invent and Discover, I must not fail to notice that Aristotle, whose Genius was not Easily Impeded in its Efforts, has actually left us an *Art of Invention.* The Structure of the Syllogism requiring the use of Middle Terms, as *Media* of Comparison, he found it necessary to make Provision for the Discovery of these Terms; and, with this view, accordingly, he added to this

Explanation of that celebrated Instrument, his Doctrine *De Locis*, or a Treatise on the Seats, or Places, where such Intermediate Notions were to be Discovered. And, although succeeding Philosophers do not seem to have made much use of the Logical Topics, Cicero and other Rhetoricians profess to have derived Considerable Advantage from them. They, accordingly, admitted this Work into their Systems of Rhetoric: and Cicero, in the same spirit, recommends to the Young and Ambitious Rhetorician to Study Subjects in the Abstract; that he might be Prepared on every Topic which should come into Discussion, or, at all events, require only a little Time to fill up Names, Dates, and Circumstances.

But, without any farther reference to the Ancient Doctrine of Invention, I proceed to inquire, a little more particularly, whether the Student has it in his Power to Improve that Special Endowment denominated Genius.

It is very evident, then, whether we Ascribe it to Original Constitution, to the Influence of Surrounding Objects, or to early Habits in Associations, that the Powers of Genius frequently Manifest themselves in Individuals, before any Voluntary or Artificial Means of Improvement could have been Applied. But, notwithstanding this Fact, and the farther Concession that little is to be expected from any Direct Means of

Improvement, it is not to be Concluded that Genius can Derive no Advantage from Constant and well Regulated Study. In perusing the History of Invention, it will be found that almost every thing Great has been effected by the Studious and Industrious; and, even, that those Inventions which have been made, apparently, by Accident, have very seldom fallen to the lot of the Idle or the Careless. Regular Action and Diligent Habits naturally prepare the Mind for the Exertion of its Higher Powers; and Many Things must, of course, occur to the Student, whose Attention is Habitually Occupied, which will never present themselves to him who Applies only by Fits and Starts. Who ever heard of an Idle Man Discovering any thing of Importance? If Diligence be the Path which leads to Invention, the Slothful will never be found in it. Let the Young Philosopher, therefore, who wishes to Improve his Talents, and who sighs for Distinction as an Ornament, or Benefactor, to his Kind, begin his Career with Perfecting, to the Utmost of his Power, the Habits of Attention and Industry; and, should he not, at once, obtain for himself the First Rank in the Scale of Public Estimation, let him be assured that these good Habits will Advance him every day nearer and nearer to the Object of his Ambition: for, when Active Persevering Diligence Starts in Competition with Mere Talent, unaided by Study, the Former, almost, never fails to be Crowned with Victory.

Further: it has been observed that all who have Effected Important Discoveries, or Improvements, are Persons who, either from Necessity or Choice, have had their Attention Vigorously Directed to the Particular Science, or Art, which they have, in the end, Enriched by their Genius. It was a deep Conviction of Actual Defect, or Imperfection, and Clear views of a Higher and more Perfect State, to which their favourite Pursuits might be carried, which encouraged their Perseverance and directed their Research. The Man who first threw aside the Mattock and made use of the Plow; he who first applied Water to Turn a Wheel for Grinding Corn, instead of doing it with the Hand; had, it is very probable, long smarted under the Drudgery of Manual Labour, and frequently revolved in his Mind Various Expedients for Alleviating the Fatigue, and for Shortening the Toil, of these respective Processes. Before Lord Bacon attempted to Substitute the Inductive for the Syllogistic Mode of Reasoning, he had clearly perceived all the Defects of the Former. It was, in like manner, a decided Conviction, that the Steam Engine was Faulty, in relation to the Consumption of Fuel, which led Dr. Watt, the Great Improver of that Wonderful Instrument, to Devise an Appropriate Remedy. The last Act, in short, or that which Constitutes the Invention, cannot be performed by those who are ignorant of the Previous Steps; and, although the Former may require a more Vigorous Effort

of the Mind, or greater Display of Genius, yet the Latter are Absolutely Indispensable as a Basis for that Effort. The plain Inference, therefore, from this Doctrine is, that the Diligent and Persevering Student has no Reason to Despair of Reaching even the Highest Degrees of Eminence, and of Contributing to those Discoveries, Inventions, or Improvements, which confer Reputation upon their Authors, and Benefit upon the Age in which they live. His First Endeavours, accordingly, for this purpose, should be Directed to the formation of Clear and Distinct Notions, as to the Elementary Doctrines of whatever Science, or Pursuit, may happen to Employ his Industry; for it is only by these Means that he will Successfully make his Way through the more Obscure and Complicated Parts of Study, which will Rise before him as he Advances, and that he will be enabled to discover where the Art has Reached Perfection, and where it may still Admit of Improvement. He requires not to be informed that Darkness cannot lead to Light, nor Confusion to Order; whilst a Feeble Light may conduct to a Stronger, as the Dawn ushers in the Effulgence of Noon. In all cases, indeed, Clearness and Certainty, in the Elementary Steps, give Vigour to the Imagination, and Facility to the Memory; and, at the same time, Enable all the Other Powers of the Mind to Discharge their Respective Offices with Readiness and Effect.

It has been still farther observed that those Persons who have Successfully Exerted their Inventive Powers, in any Department whatsoever, have, in general, been Distinguished by Great Ardour in Pursuit of their Objects. The great End of their Endeavours has been Constantly Present to their Minds—has been their Companion by Night and by Day—constituting the chief Spring of Activity, and the Main Source of their Pleasure. And, it is after the Labour, perhaps, of many a Day and many a Night, during which the Object of their Studies has given occasion to frequent Trains of Thought, Voluntary as well as Involuntary, that they, at length, Succeed in Gaining the Important Step, in Discovering the Connecting Link which Unites and Supports the Whole Chain of Reasoning.

The Pleasure derived from such Active and Awakened States of Mind has been Described as being of no Ordinary Nature. Pythagoras, on the Discovery of the Forty-Seventh Proposition of Euclid, is said, after having Expressed his Delight in the most Extravagant Manner, to have Sacrificed a Whole Hecatomb. That Ardent and Elevated State of Mind, which is denominated Enthusiasm, seems indeed an inseparable Attendant upon Genius. It is, at once, the Reward and the Stimulus of Exertion. It warms the Imagination, and Prompts it to greater Deeds; and thus Poets, who are always Characters of the

Deepest Susceptibility, have, in these States of Mind, not only Believed themselves to be Inspired, but have Prevailed on Others to believe it. It is then that they implore Supernatural Aid to Assist them in their Arduous Undertakings. "MHNIN AEIΔE ΘEA."—"Musa mihi causas memora." "Of man's first disobedience,—Sing heavenly Muse."

> "——— From Heaven descends
> The flame of Genius to the Human Breast.
> ——— Nature's Kindling Breath
> Must fire the chosen Genius; Nature's hand
> Must point the path, and imp his Eagle's wings."
>
> AKENSIDE.

Under the Cover of these Poetical Images and Allusions, it may be again brought forward, as an Objection to all that has been said on the Culture of Genius, that it is impossible to give Directions, or to construct Rules, for producing Animated Feelings, and Lofty Conceptions. This has been already admitted. Neither Aristotle nor any other Author has yet Discovered an Art whereby Men could be Taught to strike out Inventions, or to excel in Poetry and Painting. Nor can the most sedulous Teacher, in Modern Times, form, in the Minds of his Pupils, that Combination of Intellect with the Powers of Feeling and of Taste, upon which Genius so essentially depends. He cannot even lay down a System of Rules, by which such Associations shall be Formed as will Certainly Rouse the Energies of Genius, in Minds Already

Endowed with them. But he can Direct the Attention of Youth to Objects fitted to Produce those Particular Emotions which are usually found to Kindle the Enthusiasm of Superior Talent;—he can speak of these Objects with Earnestness and Warmth—of the Respect and Admiration which Achievements in Science, or in Art, never fail to Command—he can Describe the Steps, and Mark out the Path, which lead, from Industry in Study, to future Scenes of Distinction and Honour; he can Induce them to Engage in Competition; to Commence the Career of Eminence; and to Fix their Ambition on Objects worthy of their Endeavours;—and he can likewise Present to their Eyes Bright Examples fitted to Stimulate their Exertions, and to keep Alive their Ardour. In this important Work, however, the Student must also Perform his Part. He must Strain every Nerve; Neglect no Opportunity of Instruction; and Profit by every Hint or Advice. Above all, he must Allow himself to be Convinced that the Object upon which his Heart is set, can only be Attained by Regular and Constant Efforts of his own; and that no Sacrilegious Hand can possibly Interpose and do his Work for him, without Entailing on him certain Disappointment and Reproach. Here, also, it is that "They who Seek shall Find;" for all that is Good and Great in This World, as well as in the Next, is Suspended upon the Sincere and Hearty Use of the Means put into our Hands for Acquiring Knowledge, and for Improving the several Talents entrusted to our Care.

ON THE ELEMENTS OF TASTE.

ANOTHER of the Sources from which the Materials of the Lectures in this Class are drawn, are the Elements of Taste and of Composition; and, agreeably to the Plan adopted in the former Divisions, I propose, first, to give an Analysis or Explanation of the Faculties of Mind conversant in these Departments of Study; and, secondly, to point out the Means whereby they may be Improved. The Object here, too, as in the former Case, is to Communicate such Elementary Knowledge as may lay a Foundation for future Acquirements; and, at the same time, to afford suitable matter for a Progressive Course of Exercises to be Performed by the Students, in compliance with the System of Instruction and Discipline uniformly followed out in this University. It is, perhaps, hardly necessary to mention, in Relation to this Branch of the Course, that the Inquiries connected with it are Peculiarly Adapted to the Introduction of various Subsidiary Topics, extremely well fitted to Interest the Minds of the Young, to Encourage Application, and to

furnish ample Materials for Discussion, or Reflection, in the Composition of their Essays.

In conducting the Analysis now proposed of the Mental Powers connected with Taste, little Assistance can be Derived from the Ancient Critics. These Writers have, indeed, transmitted to us many fine Specimens, and Models, of good Taste; but they have not left any Traces of a Philosophical Inquiry into the Nature of those Principles, or Faculties, in the Human Mind, which lead us to perceive, and derive Enjoyment from, the particular Qualities in Objects upon which Taste is founded. There are, no doubt, some Distant Allusions to these Faculties in the Dialogues of Socrates recorded by Plato, and also in the Works of Cicero and Quintilian; but no Regular, Systematic, Explanation of them is to be found in Ancient Philosophy. During the Scholastic ages, again, no Analysis of this Nature was to be expected. The Dialectics and Metaphysics of Aristotle, with which Men were then occupied, were decidedly Repulsive to all Exercises of the Powers of Taste. The French Philosophers, in Later Times, set the first Example of Scientific Inquiry in the Department of Taste and Criticism; and they had made considerable Progress in both, before any Attempts were hazarded among the Learned of Great Britain. The Essays of Mr. Addison, in the Sixth Volume of the Spectator, held out the first Philosophical Exposition, which

appeared in England, of those Powers of Mind whose Office it is to Appreciate Objects of Taste. Since his time, however, the Writers in this Field of Literature have been both Numerous and Distinguished; among whom every one will recognize Hutcheson on the "Internal or Reflex Senses;" Hume on the "Standard of Taste;" Burke on the "Sublime and Beautiful;" not to mention Gerard, Kaimes, Blair, Alison, Knight, and Stewart. But, notwithstanding the great Mass of Talent, and of Learning, which has been thus brought to Bear upon the Inquiry now before us; the very Different and Incompatible Notions entertained on the Subject at large; the opposite Opinions held respecting the Nature and Offices of the Mental Powers; and the Various and even Contradictory Definitions, given by some of these Writers, of the Faculty of Taste itself, considered as the Source of Judgment and of Sentiment, prove too clearly that the Philosophy of Taste has not yet Attained to Perfection. The celebrated Montesquieu, for Instance, defines Taste to be a "Power or Faculty of Discovering, "with Promptitude and Nicety, the Degree of Plea-"sure which every thing ought to give to Man." Now, a Talent of Discovering is wholly Intellectual; and, besides, there are many things which ought to give Pleasure to Man, which cannot be called Objects of Taste. M. D' Alembert, again, another French Writer of Eminence, defines Taste to be the "Talent of Discovering, in the "Works of Art, that which ought to Please Sensi-

"ble and Feeling Minds." This Definition, it is very evident, applies more properly to the Art of Criticism than to Taste. Nor are the Definitions of the English Writers formed with much more Accuracy. Addison calls Taste, "the Pleasures of "the Imagination." Burke denominates it, the "Faculty or Faculties by which we are Affected "with, and form a Judgment of, the Works of Ima-"gination and the Elegant Arts." Dr. Blair calls Taste the "Power of Receiving Pleasure from the "Beauties of Nature and of Art." But it is quite unnecessary to produce more examples of the Vague and Bewildering Definitions which have been given of this Faculty, and of the Objects about which it is Conversant. The Author of these Outlines would feel regret, were he considered as detracting from the Merits of the Eminent and Respectable Writers, whose names he has now mentioned.—Their Works were written for the Public at Large; for those, particularly, who are supposed to have already made some Progress in the Studies of which they treat;—not for Students who are yet to receive their first Scientific Notions on such Subjects. They were written with the view of Extending the Bounds of a Science already established, not with that of communicating Elementary Instructions to young Persons. It is hoped, therefore, the Author will not be thought presumptuous, whilst he claims only the humble office of accommodating their knowledge to the actual circumstances of his Students—anxious to proceed no further in the Science than they

can successfully follow him. Before he enters into Abstract or Theoretical Views, he must be careful to lay a Wide and Solid Foundation, in a correct Knowledge of First Truths, and of Undisputed Facts.

Entering more closely upon the Subject, then, it may be observed that the Powers of Taste are a Combination of Certain Modes of Intelligence, and of Sensation; and have, therefore, not unaptly, been explained under the Notion of Senses. The celebrated Dr. Hutcheson denominates them Internal, Reflex, Subsequent, Senses; implying, in these expressions, a Previous Operation of the External Sense, as well as an Investigation, or Review, by the Reasoning Faculties, of the Source and Character of the Impression thereby received. Distinguishing these Powers by a Reference to the Qualities, in External Objects, upon which they are Respectively Exercised, the same Writer called One the Reflex Sense of Novelty, Another the Reflex Sense of Grandeur, and so on of the rest.

The Analogies between these Reflex or Internal Senses, and the Senses properly so called, are, no doubt, neither Few nor Remote. Both have their Particular Objects, or Qualities of Objects, which may be said to Impress them; and the Effects produced on the Mind are, in both Cases, so Immediate and Instantaneous as to Anticipate the Exercise of Reason. In like manner, too, as Judgments respecting the Existence and External-

ity of Material Objects are inseparably connected with Impressions made upon the Outward Senses, so do Corresponding Judgments, as to the Reality of the Grand, the Beautiful, and the Sublime, follow Immediately upon the Impressions which these Qualities make, on the Finer Organization of the Internal Senses.

It is chiefly, however, with regard to Two of the External Senses, of which the Eye and the Ear are the Organs, that the Analogy now spoken of is found to hold. The Pleasures derived through the Medium of the Other Organs of Sensation are never considered as Pleasures of Taste; nor are the Objects from which they are received, ever regarded as Beautiful or Sublime. We do not apply these Epithets to the Odour of a Rose, nor to the Relish of an Apple, nor to any Impression received from the Sense of Touch. The Eye and the Ear are more Perfect Senses—have a much Wider Range of Operation—possess Nicer and more Acute Discriminations, and are the Instruments of much more Refined Enjoyment. In particular, they constitute the Medium of all those Impressions which Awaken the Power of Imagination; and Supply Materials for all those Combinations of Fancy which give so much Delight in the Works of the Poet and the Painter. When Cultivated, in short, by Practice, and under the Direction of a Sound Judgment, these External Organs seem almost to Discharge, at one and the same time, the Functions of Sensation, and the Office of the

Reflex Senses. The Determination of the Mind, in these cases, is so Instantaneous that it is nearly impossible to distinguish it from mere Impression on a Bodily Sense.

It may be remarked, as somewhat Singular, that the term Taste should be taken from an External Sense, of which neither the Objects nor the Sensations have any Connection with the Reflex Senses. The same Analogy of Expression holds in the French Language, and Traces of it are to be found even in the Latin: and it is, perhaps, in all these cases, to be explained on the same Principle, namely, that, as the External Sense in question possesses an Exquisite Nicety in Discriminating Relishes; Enjoying some with Voluptuous Gratification; and Rejecting others with Strong Symptoms of Disgust; so the Internal Senses manifest the same Discrimination in Appreciating their Objects, and a Similar degree of Delight in their Enjoyment. And, further, the Analogy may be traced to this striking Circumstance, with respect to each, that, as the Simple Relishes of Food please the Palate most in its Natural State, so the Simple Qualities of Things, in the Department of Taste, particularly in regard to Music, Poetry, and Architecture, give most Pleasure to the Uninstructed Mind:—and, as, in every instance in which the Gratification arising from Meat and Drink is made an Object of Study, Compound Relishes, and Mixed Dishes, are eagerly sought after; so, in the Objects of Taste, Complication and Variety are

usually found to afford most Satisfaction to the Man of Experience and Research.

Judging from the Phraseology of some recent Authors on this Subject, there seems to be a Disposition to Contract the Meaning of the Term Taste, as applied to the Susceptibility of Refined Pleasure, as derived from certain Properties of Things; and to substitute for it the word Tact, borrowed from the Sense of Touch. Mr. Stewart, for instance, first Explains Beauty, and Grandeur, and then Taste, or Tact; whereas, most other Writers have regarded the Former as merely Branches of the Latter. Nor do I see that any thing has been gained by this change of Names. The Judgments which follow the Sensations arising from the External Sense of Taste, are as Discriminating, and Exerted with as much Promptitude, as are those connected with Touch; on which account, I cannot perceive that we should with more propriety Apply the Term Tact to nice Distinctions in the Works of Art, to Character, and Manners, than we should the authorized and long established Term Taste. We can no more literally *touch*, in such cases, than we can *taste*; and, as the use of the New Word does not Introduce, into this Field of Science, either greater Clearness, or greater Accuracy, we may be allowed to call in question the Grounds of the Innovation.

When engaged in this Species of Verbal Criticism—and, to Young Minds, an Inquiry into the Proper Use of Terms constitutes a very Useful Sort of Logical Exercise—I am in the habit of making a few Remarks on the Phrase, "Pleasures of Taste." The word *pleasure* evidently expresses an Abstract Notion, derived from Agreeable Sensations of every Description which the Mind is capable of receiving. But, although it will be readily admitted that Agreeable Sensations form a Class *sui generis*, yet Obvious and Great Differences are to be found among them. They may, indeed, be Distinguished in their Cause, as well as in their Effect. Truth and Falsehood, for example, are both Sources of Intellectual Emotion. Good and Evil, Right and Wrong, are Objects of Moral Sentiment, as Beauty and Deformity are Objects of Taste; and the Satisfaction or Disgust which attend the Contemplation of these Qualities, although radically different, are very apt to be Confounded. In particular, the Agreeable Emotions received from beautiful Objects, are, in most cases, very Difficult to be Distinguished from the Incipient Workings of Passion. The Former, however, are always Unaccompanied with Violent Desire; and differ from the Latter not only in this Circumstance, but more especially in the Characteristic Fact that their Objects are always Contemplated on their own Account, and never with the View of Accomplishing any Farther End. The Former, too,

are, in their Nature, Gentle and Calm, and but seldom marked by their Outward Appearance; the Passions, on the contrary, are often Violent and Tumultuous, and manifest themselves, on such occasions, in Agitation of the whole Frame, in Trains of Thinking, and even in Modes of Expression.

The agreeable Sensations which form the Pleasures of Taste are particularly Distinguished, too, by their Immediate Influence on the Faculty of Imagination; carrying it into various Trains of Association, and suggesting exalted Conceptions, connected, more or less immediately, with the Original Impression; whereas, the Emotions of Passion Chain down that powerful Faculty to the particular Object which Excites them, and render it the Slave of a Fixed and Determinate Appetite. These Marks will Enable the Diligent Student to Distinguish the agreeable Sentiments of Taste, from the pleasing Workings of a Grosser Principle, with which they may happen to have some features in common.

In the prosecution of this Analysis, I have thought proper to Adopt the Phraseology of Dr. Hutcheson, relative to the Powers of Taste, and to consider them as Separate, Internal, or Reflex, Senses. The following Reasons, among others, have induced me to give a Preference to this Method. In the first place, after the full Explana-

tion, already given, of the External Senses, the Transition to the Internal is both Natural and Easy. The Objects of both, too, are External; the Qualities only are Different. Sensations, also, are received from both, Differing only in Kind. The Intellectual Powers of Discrimination are the same, whether viewed as Operating on the more Common Properties of Matter, or on such as constitute Objects of Taste. The Reflex Senses, too, as well as the External, are Limited to a certain Number; the Method of Analysis is very Similar, and the Terms Employed in that Process have very much in Common. Such Resemblances, in Distinction and Division, afford considerable Assistance to the Memory and Understanding of the Young; whilst there is not the smallest danger of Confounding, in such Analytical Inquiries, the Impressions derived from Material Objects, with the Reflex Operations of the Mind arising out of these Impressions. Nor is there the smallest Hazard that this Mode of Procedure will Preclude any Judicious Attempt to Simplify the Explanation of Mental Phenomena. The Period of Communicating Elementary Knowledge is not, however, the Proper Season for Pushing Refinement to its Utmost Limits; for it is not so much the Origin, or Generation, of Mental States, which the Teacher must keep in View, as the Operations to which they lead—their Objects—their Effects—and the General Circumstances connected with them.

The Analysis of each of the Reflex Senses, then, is conducted according to the following Method:—

1. The Attention of the Student is First Directed to the Particular Qualities in Nature, and in Art, which correspond to the several Senses of Novelty, Grandeur, Sublimity, Beauty, Ridicule, and Imitation.

2. The Attention is next Directed to the Character of those agreeable Sensations, which attend the Exercise of the Reflex Senses, when pointed to their Respective Subjects, and which lay the Foundation of the Pleasures of Taste.

3. The Minds of the Young are then guided to the Consideration of the Final Cause of Taste, or to the Purposes served by such Sentiments, in the Human Constitution.

It cannot be necessary to remark, that the Minute Detail absolutely Indispensable in Communicating to Young Persons Elementary Instruction in the Form of Lectures, would be altogether out of place in such Outlines as the present; and, at the same time, not a little Tedious to those who have already made some Progress in this interesting Study. All that seems necessary, or even Proper, in this place, is to give a Specimen

of the Manner in which the Analysis is Conducted; and, for this Purpose, I have made choice of the Reflex Sense of Beauty.

First, then, On the Objects of the Reflex Sense of Beauty.

This Sense, it may be truly asserted, is an Original part of the Human Constitution. In whatever condition Man is placed, the Influence of this Principle renders itself manifest in the Untaught Preferences which it leads him to make of such things as he deems Beautiful. It does not, however, Discover itself so Early as some of the other Internal Senses. Infants show scarcely any Tokens of it whatsoever. The Nurse, however Ugly she may be, is Preferred to all other Human Beings, even to those of the most perfect Beauty, and regular Form, of the same Sex. It is a Sense, too, which seems strictly Peculiar to Man. Some faint Traces of the Sense of Novelty may, perhaps, be Discovered among the Inferior Animals; but none of them, Esop's Animals excepted, Discover any Sensibility to Beauty. His Jack-Daw dressed itself in the Feathers of a Peacock.

It is expedient to point out at this Stage to the Junior Student, that the term Beauty is very Equivocal in its Meaning; being sometimes applied to the Power or Capacity in the Mind, and, at other Times, to the Corresponding Quality in an

External Object. Were we, however, to Judge of the Import of this Term, from the Frequency and Facility with which Men Use it, we should consider the Subject of Beauty, as holding out one of the Simplest of all Inquiries. No Person thinks that he can possibly be Ignorant of the Meaning of such a Common Expression, or that in the Notions suggested by it, he Incurs any Risk of falling into Error. But when such Questions as the following are put to him; "What is that Quality which, in so many Different Objects, and under so many Different Forms, has the Power of Charming every Class of Human Beings? Is it in the Object, or is it in the Mind which Perceives the Object? Is it something Absolute or Relative?—something which would Please all Men in all Conditions of Society, whether Rude or Civilized, Learned or Unlearned?" To these and such like Questions nothing but Doubtful Answers are obtained: such Answers, indeed, as might justly lead to the belief, that the same Impressions are not Received by every Individual from the same Objects, although perceived in the same External Circumstances. Nay, on many Occasions, we hear some Persons applying the term Beauty to Objects, in which Others, equally well informed, can see nothing Beautiful whatever: and, in Instances still more Numerous, even when Men are Agreed as to their General Notions on this Subject, and actually Consent as to the Existence of the Quality in Particular Cases, we find them, yet, Differing

with Regard to the Degree in which it Subsists, and Maintaining their Respective Opinions on Grounds so Incompatible with the supposition of a Fixed Standard, or Principle, for Judging, that we are Compelled to Conclude, that the Sentiment of Beauty is not, as hasty thinkers would have it, a Simple, Ultimate, Impression. In short, it requires but a moment's Attention to be satisfied that the Ideas of Men on this Head are Extremely Indefinite and Unsteady; that the same Object appears Charming to One, Indifferent to Another, and to a Third Positively Disagreeable: and, moreover, that the Object may be Admired or Neglected, Praised or Despised, by the same Individual, at Different Times, and in Different Humours.

In explaining the Causes of this Ambiguity, it cannot fail to be remarked, that the Variety and Number of the Objects, to which the Epithet Beautiful is Applied, have a Direct Tendency to Perplex and Confound our Notions in regard to Beauty. It is applied to the Human Countenance; to the Plumage of a Bird; to the Colours of a Fish, or of an Insect; to Flowers and Plants; to a Hill, a Palace, a Head-Dress; to a Pair of Buckles, a Diamond-Necklace, a Handkerchief; to a Poem, an Essay, a Problem, a Syllogism; to a System, or Theory; to Certain Virtues; to Character, and General Conduct. These Objects are so Strikingly Dissimilar that it is scarcely Possible there

should be any Quality Common to them all. The Question, however, which now Demands Solution, respects not the Various Objects which may happen to be called Beautiful, but rather that particular Quality in them, considered as a Class, which Constitutes Beauty.

This Question, however, is beset with Additional Difficulties, arising from the Nature of Sensation—from the Imperfection of the Discerning Power—and, in a particular manner, from the Poverty of Language. As the first Notions of Beauty are derived from External Objects, by Means of Sensation, they will necessarily Differ in Individuals, according both to the Delicacy of the Organ, and the Various Degrees of Susceptibility which belong to different Constitutions: and, as the Powers of Discernment do not extend to Minute Differences, in the Degree or Quality of a Sensation, we have no precise *data* for Comparison, as applicable to the Impressions made on the Mind of one another, and cannot, therefore, Determine with Accuracy a Scale of Sensible Beauty. With regard to other kinds of Beauty, where the Elements which enter into the Conception can be Determined and Appreciated, our Notions very generally Coincide. In Architecture, for instance, of which the Beauty depends upon *data* which can be Measured, and is regulated by principles which can be Expounded, the Opinions of Men qualified to judge, are found to be every

where nearly the same. Again, as to the Excellence of a Frst rate Picture, or Statue, there is a very general Agreement in Opinion; but, wherever the Notion of Beauty depends upon Sensation, there Must be, from the Various and Undefined Nature of such Impressions, no small Scope for Difference of Sentiment.

The Imperfections of Language, too, add very considerably to the Difficulties and Obscurity which prevail on this Subject. The want of Terms to mark every Shade or Degree of Sensation, necessarily compels Men to apply the same Sign to very Different Impressions, and even to the denotement of States of Feeling which have scarcely any thing in common. A Child, for example, hears the term *good* applied to Milk, to Sugar, and to Honey; and these objects, although very unlike to one another, being to him the Cause of Agreeable Sensations, are, naturally enough, classed by him from a Relation to that Common Property. In like manner, there is a vast variety of Things Called Beautiful, and regarded as such by all Mankind; but, owing to the Imperfection of Human Speech, and to the Multitude of Ideas which enter into the Conception of Beauty, the same Term is Necessarily Applied to Objects which have Nothing more in Common than the Child's Milk, Honey, and Sugar. The Emotion produced is, Generally speaking, of the same Kind in all Cases; and neither Language,

nor the Power of Discrimination in the Mind will enable us to Push the Distinction to Radical Differences. This point, however, will be more seasonably discussed towards the close of the Analysis. It may, in the meantime, be remarked, that our Notions on this Subject are still farther Perplexed by the Circumstance that Beauty is not the only Quality in Pleasing Objects which produces Agreeable Sensations. Did Beauty, indeed, exist in Objects exclusive of all other Qualities, it would be more easy to Catch that *fleeting shadow;* but things which are Beautiful, are often, also, Good and Useful, and, consequently, produce, in the Mind, other Notions besides that of Beauty. Different Sensations, proceeding from the same Object, are easily Confounded, both in Thought and Language; and we find, accordingly, that they are generally Blended in one Conception, long before the Mind is Qualified either to Separate or Distinguish them. It is in proportion, therefore, as the Powers of Discrimination are Improved, that our Perceptions of Beauty will be Refined; and, particularly, that we shall Discover whether we are Delighted with an Object merely for its Qualities, as they Affect the Principles of Taste, or from a reference to some Ulterior Purpose.

The Perception of Beautiful Objects, is always Accompanied with the Belief that these Objects do, in Reality, possess Properties which make them

Desirable; in other Words, we Ascribe the Sensations which we experience, to the External Object, and not to our own Minds. Mr. Addison has said, however, that there is neither Beauty nor Deformity in One Piece of Matter more than in Another, and that we might have been so Formed as not to perceive any such Distinction. But the plain Answer to this is, that we are not so Formed; and that we do Perceive such Distinctions in Different Pieces of Matter; being satisfied, at the same time, that the Perception is founded in the Essential Difference of the External Qualities, and not in any Peculiar Condition of Susceptibility on our parts, as connected with the Exercise of the Will. If Mr. Addison means by Beauty a Feeling or Sensation in the Mind, there is very little Ingenuity displayed in the Remark, that there is no Beauty—that is, no Sensation—in the Material Object.

After these Preliminary Remarks, naturally suggested by the Subject, and of no small use to Young Men just entering upon this Field of Inquiry, I proceed, agreeably to the Plan already sketched out, to consider the several Qualities in Sensible Objects, whether in the Department of Nature, or in that of Art, to which the Epithet Beautiful is commonly Applied. It is not, indeed, to be expected that Complete Success will be Attained amidst such a Variety of Opposite and Contradictory Opinions; but, inasmuch as I shall,

hereby, supply to my Pupils Materials for Thinking and Composition, and, at the same time, point out to them a Method by which they may, hereafter, Instruct themselves, I am satisfied that my Exertions will not be altogether Useless.—It may be proper to mention that, as Beauty, regarded as an Object of Taste, extends to a great Variety of Subjects, so the Term is here employed in its Widest Acceptation; being applied to Colour, to Form, to Sound, to Proportion, and to Numerous other Properties, usually introduced into this Department of Study.

ON THE BEAUTY OF COLOUR.

As no Object is Visible but by Means of the Colour reflected from it, the Epithet of Beautiful seems to have been originally applied to Coloured Substances, or rather, perhaps, to the Colours themselves. At this Early Stage, accordingly, the Difficulty of the Analysis begins. Is Colour Beautiful on its own Account? And, if so, what is the Kind or Degree of Colour to which that Term is properly applied? To Ascertain this point, as far as it is capable of being Ascertained by Young Students, the Baconian Prism, so to call it, must be Employed; that is, a Close and Minute Attention must be given to the Subject,

guided by a Constant Reference to Consciousness and Observation, on the part of the Inquirer.

Suppose, then, a Visible Object to be Presented, which has no claim to the Epithet Beautiful but its Colour; it will be found that the Pleasure, received from Looking upon it, will be Greater, or Less, according to the Degree of Excitement which the Rays of Light, reflected from its Surface, produce upon the Organ of Vision. To this Extent, therefore, an Object may be pronounced Beautiful on its own account. The Organic Affection is Agreeable; and thus, according to a Natural Principle of Association in the Mind, the External Cause of it will be regarded as Beautiful. The first Fact, then, which can be Established on this Head is, that no Colours which are either too Faint or too Brilliant are ever held Beautiful. The Beauty of Colour, on the contrary, seems to have taken its place somewhere Between these Extremes. It must be Clear, without being Glaring; it must be Bright, and yet not Dazzle. It must Excite sufficient Activity in the Organ, without inflicting Pain, or threatening Injury.—Here an Appeal is made to the Observation and Experience of the Students themselves, and they are requested to Examine into such Facts as may fall under their Notice, and to Compare, with the Views now given, their own Unassisted Conclusions. The Subject is then followed out a little farther, by observing that the Beauty of the Human Countenance is

found to Correspond with the Principle just stated; its Colours being neither a Glaring Red, nor a Dead White, but an Imperceptible Mixture of both. The fine Colours of the Vegetable and Mineral Kingdoms are all of the same description. Neither the very Bright nor the very Pale Rose, is esteemed Beautiful; this Epithet being reserved for the Pink, the Violet, and for that Particular Species of Rose which Combines and Softens the more Lively Tints. But every one must make Experiments for himself; note Exceptions; mark Differences; collect and arrange well Authenticated Facts.

In conducting this Analysis, it is necessary to separate, as distinctly as possible, the Direct Beauty of Colour from the Beauty in Coloured Objects, arising from Association. When Beauty in an Object is Associated with other Qualities, which produce Agreeable Sensations of another kind, these Qualities, as has been already remarked, tend to Enhance the Conception of its Beauty, and to render it, in fact, more Pleasant to the Eye. Thus the Rose comes to be esteemed More Beautiful, from the Agreeable Odour with which it is Associated; whilst the Peony is stripped of a part of its Natural Beauty, owing to the Unpleasant Smell which it diffuses around it. It may, indeed, be set down as a general Remark, that when, on any account soever, Objects are the causes of Agreeable Sensations, we are apt to think

them more Beautiful than they are. It is not to be imagined, however, that there is no Beauty in Colour, but what arises from Association of Ideas. Nothing more is meant than that the Principle now stated adds to the Pleasure derived from Beautiful Colours an additional Pleasure of Another kind, more or less remotely connected with it, and that, from want of proper Discrimination, the Effects resulting from the Latter Cause are often Ascribed to the Former.

It is true, indeed, some Late Philosophers maintain that there is no such Thing as a Direct, Sensible, Beauty of Colour; and that all the Pleasures of Taste, which are usually referred immediately to that quality in Objects, arise Indirectly from its Association with Mind, or Moral, Intellectual, Beauty. The Sensations received from Coloured Surfaces are, thus, regarded as mere Organic Impressions, which can give neither Pleasure nor Pain, but in as much as they Fail, or Exceed, in Affording due Action to the Nerves, and other parts of the Corporeal Instrument of Sense. In Short, we are taught by them to believe that there is no Intellectual Enjoyment, and scarcely any Mental Converse, in those Sensations which constitute the Basis of our Judgments and Feelings in matters of Taste.

It is admitted, that there are High Degrees of Moral and Intellectual Excellence which cannot

be contemplated without the most lively Sentiments of Admiration and Love; and, when the Term is properly Restricted, there can be no Objection to the Practice of Describing these Mental Qualities, as Beauties of the most Elevated and Perfect Order. But this Certainly affords no reason for Annihilating, or Absorbing, Sensible Beauty. On the contrary, it is only from a Reference to the Qualities which constitute this latter Species of Beauty, considered too, as a Standard, that the Epithet Beautiful, in any plain or proper sense, can be Applied to Moral or Intellectual Eminence.

It is altogether Unphilosophical to say that the Sensible Quality of Colour, and the Agreeable Emotions which arise from it, are not entitled to the Appellation of Beauty, merely because they depend upon Impressions of Sense, and, because the Senses are an Inferior part of our Constitution. This Circumstance, of itself, ought not, assuredly, to Lower the Estimate of Sensible Beauty; unless those who hold such an opinion be, at the same time, prepared to deny that the Human Mind does ever enjoy Any Pleasures but such as spring from Reflection and Abstract Thought. Properly speaking, there is no Mere Bodily Pleasure, though the Body be the Instrument by means of which All Pleasures, even the most Intellectual, are, Directly or Indirectly, produced. In this, the Superiority of our Nature to that of the lower

Animals is strikingly Manifested; for, whilst they have Senses, in many instances, much more Powerful and Acute then those of Man, they seem not to have the Slightest Perception of Beauty, either of Colour or of Form. The Quality of Sensible Beauty, therefore, which so powerfully penetrates and forces its way to the heart of Man, is not to be reckoned among the Grosser Pleasures of Sense.

It is, unquestionably, somewhat inconsistent, also, in another point of view, to refuse to Colour, Directly, and without Association, the Epithet of Beautiful, as such a measure implies that the Original Source of Beauty, the Quality, in short, from which the Term is Borrowed, has ceased to to be Beautiful. Without Light and Colour, in truth, it is difficult to form a Conception of either Beauty or Enjoyment. The Imagination, in such circumstances, can lay hold of no Images but those of Creation veiled in Black Darkness, of Animal Life dying fast away, and of General Insecurity and Horror; and we are naturally inclined towards the Spirit and Frame of Mind in which Mr. Addison declared that, even in the prospect of Enjoying Celestial Happiness, he could not altogether forego the Delightful Impressions attending the Sensation of Colour. "The Ideas of Colour," says he, "are so Pleasing, and so Beautiful, that it "is possible the Soul will not be deprived of "them, when it enters upon another State of

"Existence, but who will perhaps find them Excit-
"ed by some other Occasional Cause, as they are
"at present by the different Impressions of that
"Subtle Matter on the Organ of Sight."

The Philosophy which attempts to Resolve Sensible Beauty into Association, is not likely to throw much Light on this Intricate Subject: on the contrary, it seems calculated to render the Analysis of it much more Difficult, and Uncertain. When Sensible Beauty is considered as nothing more than the Occasion of Introducing to the Mind the Higher Beauties of Association, it seems impossible to fix any Point from which we could Set out in Determining the Nature of that Mysterious Quality. There is no Standard left by which we can Judge, or to which we can Refer our Notions. The Foundations of the Doctrine on this Subject, viewed as a Scientific Inquiry, are completely removed; and Beauty, in Nature and Art, is made to Depend upon Accidental Association in Some Minds, and upon a Lively Fancy in Others.

To bring the Matter to a Practical Criterion, suppose this Question put; "Whether does the
"Pleasure we receive from a Beautiful Landscape,
"Depend more on Direct Impression, or on Asso-
"ciation?" What will be the Answer? Are not the Direct, Sensible, Beauties of Colour, and Form, the Chief Sources of the Delight which we Enjoy

from the Contemplation of a Fine Country, in the Pride of Summer? The Mind, in such Circumstances, is Guided by the Eye, and is Charmed with the Gorgeous Display of Luxuriant Vegetation, the Green Wood, the Swelling Hill, the Towering Crag, the Winding River, the Spreading Lake, and the Sunny Plain, bounded by the Hazy Outline of the Lofty Mountain, mixing with the Clouds. All this is mere External Loveliness, mere Sensible Beauty, admitted by the Organ of Vision; and these, certainly, are sufficient Materials for the Gratification of an Unsophisticated Taste, without the Artificial Adjuncts which some recent Theorists would throw in, to Supply, as it were, the Deficiencies of Nature.

Let a view, then, be taken of the same Object through the Medium of Association; and we must Begin by regarding the Sensation of Colour, and Form, as altogether Unimportant, as being nothing more, in fact, than the mere Occasion, or Impulse, necessary to Precede the Workings of the Associating Faculty. What, then, are the Associated Objects which form the Principal Beauties of the supposed Landscape, on the present Hypothesis? They are, it may be conjectured, the Images and Anticipations which are usually connected with Fertility, Production, Plenty, and, above all, with the Peaceful Happiness, and Simplicity, of the Human Beings who Direct the Operations of Nature, and Enjoy her

Bounty. But, by what Magical Charm is it brought to pass that the Splendid Beauties of Colour and Form, in all the Pride and Majesty of their Summer Glory, should be Heightened by the Associated Ideas of Lands Cultivating, Manure Collecting, Dunghills Smoking, Lime Burning, Labourers Sweating, and other Similar Appearances?

Besides, there are many Beautiful Phenomena of Colour and Form in the case of which it would be Extremely Difficult to trace the Delight with which they are always Contemplated, to any Associated Ideas whatsoever. For example, where shall we find Associations, which will make any Addition to the Pleasure we receive from Viewing those Beautiful Streaks of Variegated Colours in the Sky, sometimes seen, even in this Northern Climate, in a Fine Summer's Day?—those Light Airy Clouds of most Delicate Mixture, which allow the Eye to pass, as it were, beyond its Usual Sphere of Vision? If these Beauties depend not upon Varied Colour and Form, I should be glad to know from what Associated Ideas, or Objects, the Pleasure is Derived. It would, surely, not be deemed Satisfactory, were nothing more Urged in Reply, than that we View these Phenomena with Pleasure, because they are Associated with Fine Weather, and with the Manifold Advantages which never fail to result from it.

Having discussed this Branch of the Subject at some length, I now proceed, in the Lectures, to Inquire into the Import of the Term Beauty, as Applied to Form, to Sound, to certain Displays of Genius, and to Virtue. Every one knows that there are certain Forms, Simple and Compounded, which, from their Regularity, Variety, Proportion, Symmetry, and Congruity, are esteemed Beautiful. Examples are referred to of Objects possessing Some of these Qualities. In like manner, an Explanation is here given, in the Lectures, of what Constitutes Audible Beauty; including such Considerations on Melody, and Harmony, as seem requisite to point out their Relations to Different States of Mind, and Conditions of Human Improvement. The Development of this Doctrine is still further Extended, and its Application Illustrated, as it respects the Beauty of a Problem, a Theory, a System, Character, Conduct, and Manners.

——————————"Is ought so fair,
In all the dewy landscapes of the Spring,
In the bright eye of Hesper or the morn,
In Nature's fairest forms,—is aught so fair
As virtuous Friendship?"

AKENSIDE.

2d. I now go on to the Second Head of the Analysis of the Powers of Taste, which consists in Drawing the Attention of the Students to the Particular Character of those Agreeable Emotions which are received by means of the Reflex Sense

of Beauty. In the Former Section, the Student was Directed to Attend to Certain Qualities, in a great Variety of Objects, to which the Epithet of Beautiful is applied; Here, he is Invited to Examine into Certain Modes of Sensation, and States of Feeling, Produced by those Qualities on the Percipient Principle, denominated an Internal Sense.

It is first of all, then, abundantly Obvious that the Emotions and Sentiments produced in the Mind by so many Different Objects, or Kinds of Beauty, cannot be, in every respect, the Same. The Experience of every Man will convince him, that the Feeling of which he is Conscious is not precisely the same, when he Contemplates a Beautiful Shell, or Flower; when he Examines a Poem, or Picture; and when he Reviews the Details of a Generous or Charitable Action. But, with Minor Differences, there may still be some Common Feature, by which these Sentiments will be Recognized, as belonging to the same Family;—"Quales decet esse Sororum."

The Emotions produced by Beauty, of every Kind and Degree, are Certain Modifications of Admiration and Love; proceeding not from any View of Immediate or Ulterior Advantage, but Instantaneously Excited by the Mere Contemplation of the Object from which they arise. It is almost Characteristic of these Emotions, too, that

they Inspire the Mind with Gay and Enlivening Sentiments; infuse Spirit and Activity; introduce Cheerful Ideas; and dispose the Imagination, as Mr. Addison expresses it, to run into Agreeable Trains of Association, diffusing a secret Satisfaction over the whole Soul. Even the Terms in which these Feelings are Expressed, indicate the Agreeable Nature of Beautiful Objects. Beauty is said to Charm, to Enchant, to Bewitch. With regard to Intellectual and Moral Beauty, indeed, the Sentiments are of a somewhat different Nature. The Glow of Delight and Animation, inseparable from the Contemplation of Beauty, is Ennobled with the more Elevated Feelings of Admiration, Reverence, and Love—accompanied with a Desire to Imitate, to Honour, and Reward.

The Emotions of Beauty are easily distinguished from those of the Other Reflex Senses. The Feelings produced by the Sense of Novelty are Tumultuous and Fluctuating; are easily Excited, and soon Subside; and, after one Impression, are never found to rise again to the same Height. The Sentiments inspired by the Beautiful are, on the contrary, both more Equable and Durable; and the Mind returns, Repeatedly, to the Contemplation of it, without any Diminution of Pleasure. The Emotions of Grandeur, again, are Grave and Solemn, disposing the Imagination to Serious Trains of Thought, and thus constituting a Character of Feeling altogether Different from that of Beauty.

Upon the whole, then, it may be concluded that, however Dissimilar Beautiful Objects may appear, in other respects, they all possess the Common Quality of giving Pleasure, such as has just been described, and of Exciting Emotions of the same Cast and Tendency. Even the Sentiments which arise from Contemplating a Generous Action, or an Unspotted Character, will, to a certain Extent, be found in Unison with those which are Excited by the view of a Fine Landscape, or the Tranquil Brilliancy of a Setting Sun.

From these Illustrations, accordingly, we may arrive, step by step, at the Knowledge of the Cause, why the Term Beauty has been applied to so many Different Objects; and, from what has been brought forward, it may not seem presumptuous to Infer that it is Similarity in the Emotion Excited which leads to the Application of the same Term, in Cases not in all respects similar. This Object, and That Object, are called Beautiful, because they produce, each of them in its own way, Feelings marked with many Common Properties. An eminent Philosopher of the Present Day, who, to his other great merits, has certainly added that of Illustrating some Abstract Parts of his Subjects with more Precision and Elegance than any of his Predecessors, maintains that the Term Beauty is Applied to a Series of Objects, having a Common Quality, in such a state of *Evanescence*, that, though you may Discover this Common Quality

betwixt A and B, and between B and C, and between C and D, yet there is no Possibility of discovering it between A and E, or, indeed, any Three Letters of the given Series. This Illustration does not appear to me, in the way I understand it, quite Satisfactory. On the contrary, nothing seems more Obvious than that A, and B, and C, receive the application of the Term Beauty, because they possess a Common Property, or the Power of Exciting a Homogeneous Emotion. Suppose, therefore, that, instead of these Alphabetical Characters, the Term Beauty were Applied to a Series of *Things*, to Colour, to Form, to Sound, to Certain Exhibitions of Intellect and Virtue; and it would appear that there is no Particular Relation subsisting between the First and Second, the Second and Third, the Third and Fourth, consistently proceeding towards Evanescence, and incapable of being traced as subsisting between the First and Third, or Second and Fifth. So far, however, is this from being the Case, that we shall find that, in Whatever Order, or in Whatever Rank, of the Series, we place Colour, Form, and Sound, we shall perceive the Ground of Relation among All the Members indiscriminately; and, moreover, that this Relationship consists not in the External Qualities of Objects, nor in the Organic Affections in the Bodily Senses, but in the Character of the Emotions and Feelings which these Qualities produce in the Mind. All Objects, as has been already stated oftener than once, which Excite the Emotions appropriate to Beauty, are, from

the Barrenness of Human Speech, denominated Beautiful; and the Extent of this Quality, in Particular Objects, is not to be ascertained from their Relation to one another, but from their several Effects upon the Percipient Principle in the Mind of Man.

3dly, The Attention of the Student is directed, in the last place, to the Final Causes of Beauty, with the View of Suggesting Suitable Motives to the prosecution of this Interesting and Instructive Subject.

The Gratifications of this Sense constitute the most Innocent and Refined Enjoyments which fall to the lot of Man upon Earth, and afford, at all times, an Agreeable Relaxation, and an Elegant Pursuit. The great Author of Nature has surrounded us with the Fair and the Beautiful: for,

——————————— "Not content
With every Food of Life to nourish Men,
By kind Illusions of the Wording Sense,
He makes all Nature Beauty to the Eye,
And Music to the Ear." AKENSIDE.

That we may duly Estimate the Value of the Pleasures derived from this Sense, we have only to Imagine the Human Mind in the Possession of all its Other Faculties, and deprived of the Sense of Beauty. The Objects which Encompass Man on all hands, and which, with his present Confor-

mation of Faculties, afford him so much Delight, would then entirely fail to Attract his Notice, except in as much as they should appear to Minister to his Sensual Appetites, or to hold out the hope of Distant Advantage. The Landscape, in all the Glow of Summer Beauty, would be Overlooked; the Sweetest Melody of the Grove would be Neglected; the Sun himself, the most beautiful and glorious of all created things, would perform his Course, Unnoticed, and Unadmired; except in so far as his Heat might be conceived to Operate a Beneficial Effect upon mere Animal and Vegetable Nature.

But the Operations of this Reflex Sense not only promote the Innocent and Purest Enjoyments of Man; they also become the Noblest Incentive, and the most Energetic Motive to Study the Works of Nature, in all the Departments of her Power and Beauty. The Beautiful in Objects first Attracts his Attention, and Invites his Inquiries; Scientific Views of a more Profound Description succeed; and the Student is thus allured into the very Recesses, and the Deep Things of Creation; into the Calculations of the Astronomer, and the Discoveries of the Chemist. In this progress, accordingly, the Student of Natural Science approaches nearer and nearer to the Deity himself, the great Source of all Beauty, and Excellence, and Perfection; and the more Closely we Connect the Fair Things of the Material World

with the Attributes of the Omnipotent Creator, the more Holy will be our Lives, and the more Refined will be our Desires, with respect to a Future Existence. Destined for the Enjoyment of perfect Beauty and Excellence, hereafter, the Wise Author of our Nature has Endowed us, in this State of Being, with a Sense, calculated, at once, to make us Enjoy whatever Portion of these Qualities are vested in Matter, and to prompt a Search and Appetite for a fuller Display of them, in that more perfect State, where the Faculties of Man shall be Invigorated and Enlarged, and where the Works of God shall be more Intimately Known.

Thus, it becomes a Sort of Religious Duty in Youth to Enlighten and Improve this Sense, particularly as it respects the Perception and Enjoyment of Moral and Intellectual Beauty; for they will thus Secure to themselves a Treasure of which no Accident can Deprive them, which Adversity cannot Diminish, and which the most Savage Tyranny cannot Interdict. Here, they may Love without Excess, and without Danger; for the Gratification of Sense is, in this instance, connected with the Improvement of the Understanding, and with the Love of Elegance and of Virtue.

After finishing, in the Lectures, the Analysis of the Reflex Senses of Beauty, a similar Analysis is given of the Corresponding Senses of Novelty,

Grandeur, Sublimity, Ridicule, and Imitation. The same Method is pursued, in Relation to all these Faculties: 1st, The Qualities, in External Objects, are pointed out which Impress the Senses, whether Directly or by Association; 2dly, The Peculiar Character, or Distinguishing Features, of the several Emotions are Explained, as connected with their Particular Senses; and, 3dly, The Final Cause of these Emotions is Illustrated, or the Purposes which they are meant to Serve in the Human Constitution. In the Details, arising on these Points of Investigation, an Appeal is constantly made to the Experience of the Student, to his Observation, his Feelings, and Judgment.

To this Analysis of the Reflex Senses is added that of Sympathy and the Moral Sense; being in some measure connected with the Powers of Taste, in point of Analogy, as well as in the Means of Improvement. In this Division, too, recourse is had, at every Step, to Example and Illustration, Arranged, according to the best of my Judgment, so as to Excite the Attention of my Pupils, and to Encourage them in the Prosecution of their Studies.

I conclude this part of the Lectures with observing, that there is little prospect of carrying the Science of Taste to any high degree of Perfection, without a strict Analysis of the Mental

Powers upon which it depends; a Knowledge of their Respective Objects and Operations; and a Copious Collection of well Established Facts, to serve, at once, as a Basis, and as the Means of Illustration.

ON THE CULTURE OF THE POWERS OF TASTE.

In the Analysis of these Powers, as Exhibited in the Foregoing Chapter, it has been shewn that they are partly Sensitive, and partly Intellectual; and that their various Offices and Operations cannot be satisfactorily Explained but on the Supposition of their Compound Nature; and, moreover, that those Authors who have assumed the Simplicity of these Faculties, and have endeavoured to Account for the Different Effects which Attend this Exercise, by ascribing them, Entirely, either to Intellect or Sensation, have failed of Success in many Important Particulars. Taking it for granted, then, that, by Means of the Analysis now alluded to, the Student may be able to Form a Distinct Notion of these Mental Endowments, I proceed, in this part of the Lectures, to point out the Proper Method, or Course of Study, by which they may be Improved—by which they may, in due time, Attain that Happy Union of

Correctness and Delicacy, upon which a Good Taste so intimately Depends.

That these Powers are Susceptible of great Improvement may be Illustrated by their Progress, in Rude Nations, from a Weak and Unformed State to Considerable Degrees of Perfection; and also by the Gradual Advancement, in more Civilized Societies, of the Various Works of Art; which, at the first, betray many Marks of an Unenlightened and even Perverted Taste, but, afterwards, as Knowledge Increases, and Delicacy gains Ground, are seen to throw off the Taint of Barbarism, and conform, by degrees, to the Maxims of Intelligence and Refinement. To enable him to follow out the Various Steps of this Progress, the Student is directed to such Histories of Early Nations as will supply him with the Clearest and most Authentic Notices, relative to their Pursuits, and Predilections, in the Department of Taste; the Objects selected by them to Display or to Gratify it; the Gradual Development, and Cultivation, of the several Faculties now under consideration; and, above all, the Train of Circumstances which Suggested gradually the Necessity of Change, and the Principles which Regulated their Successive Improvements, in the Arts and Elegancies of Life.

An opportunity is here taken, in the Outset, to Impress, upon the Minds of the Younger Students,

that Good Taste is closely Connected with Good Morals, and Propriety of Conduct; that the most exalted of all the Species of Beauty is the Beauty of VIRTUE; and that, although the Perception of Excellence is not altogether Incompatible with Vicious Habits, yet few Bad Men have been Distinguished by a Nice Taste, or Keen Relish, for the Beautiful and Sublime, whether in Nature or in Art. The Young Man is thus taught that his Taste will be most Successfully Improved by those Pursuits and Studies, which tend most Directly to preserve Delicacy of Feeling, and to cherish the Virtuous Sensibilities of the Heart. In this respect, the Rules of Art are made Subservient to the Laws of Virtue; and the Painter or the Poet, accordingly, who Transgresses against the Latter, is universally held Guilty of an Offence against both.

As the Powers of Taste, agreeably to the Explanation of them just given, Partake of Intellect as well as of Sensation, it naturally follows that whatever Exercises are found to Promote the General Culture of the Understanding, Clearness of Conception, Accuracy of Judgment, and Propriety of Language, these Exercises will also Promote the Culture of the Faculties of Taste. This must be very Obvious from the Simple Consideration that the Intellectual Powers, by which we Perceive and Judge in Matters of Taste, are the same which are Employed in determining Truth

and Error, in the Department of Science, and Right and Wrong, in that of Morals; the Exercise of every Faculty being only Modified by the Particular Subject to which it is Directed. The French Critics, accordingly, have given to that Modification of the Intellectual Powers which is manifested in the Studies of Taste, the name of *Bel-esprit;* a Term which, although not exactly rendered by the phrase *fine understanding*, sufficiently expresses that Quickness of Discernment, Clearness of Thought, Briskness and Activity of the Imagination, which are necessarily Implied in all our Decisions as to Matters of Taste; and, at the same time, distinguishes these Intellectual Processes, from that more Vigorous and Profound Exertion of the Understanding which is required in the Pursuits of Science. Every Exercise, therefore, in the Course of Education, which accustoms Young Minds to Distinguish that which is separated by Nice or Less Perceptible Gradations—to Found Judgments upon such Perceptions, and to Express these Judgments with Readiness and Accuracy—must be Favourable to Improvement in Taste.

With regard, on the other hand, to the Sensitive Properties of the Powers of which we are now speaking, the Means of Culture must be Derived, as in the Case of the External Senses, from an Extensive Experience, generally considered, as well as from a Minute Attention to

particular Impressions, when connected with any Class of Objects, of which the Mind wishes to Ascertain the Specific Qualities. As the Palate of a Wine Merchant, and the Nostrils of a Perfumer, acquire, from constant use, a Superior Delicacy and Readiness, in distinguishing Taste and Smells; so, in the Department of the Fine Arts, and in the Appreciation of Natural Beauties, a certain Quickness and Refinement of Eye and Ear are Attained, which, to those who have not Studied Painting and Music, appear almost Incredible. But it may be said, perhaps, that, as far as the mere Organic Impression is concerned, the Field for Culture is not very Extensive. The Principal Exertions of the Student must be Directed to such Maxims and Rules as are founded upon careful Observation, and just Reasoning; and, in particular, to the Works of the most Approved Masters, in the several Departments of Art, whether Poets, Orators, Statuaries, or Painters.

But, although all the Fine Arts are Closely connected together, and Exhibit so many Common Qualities as to Constitute a Relationship, both as to their Origin, and the General Object which they are meant to Promote, it is very evident that some of them, Painting, Sculpture, and Music, for example, cannot be properly Explained, either as to Theory or Practical Rules, in a Course of Academical Lectures. In Such a Course, the Pro-

fessor must Select his Materials from Poetry, Eloquence, and History; for, of these he can present to his Students such Specimens as will, at once, serve for Models to be Imitated, and afford him an opportunity of Illustrating the Principles which guide the Poet and the Orator in their Compositions, and likewise the Ability, and Skill, with which any Particular Poem, or Speech, is Executed. Some have expressed doubts whether History should be Ranked among the Fine Arts. Without, however, entering into any Discussion on this point, on General grounds, I admit Historical Compositions into this Portion of the Lectures on Taste; as Affording an Excellent Field for Illustrating the Rules of Order and Arrangement, in the Distribution of Materials, as well as those Rules which respect the Accommodation of Style to the different parts of a Subject; being, all of them, Finely exemplified in the great Variety of Topics which necessarily Employ the Pen of the Historian—in Narration, Description, Eulogy, Indignation, and Reproof.

The Method, then, which is pursued in the Lectures on the Improvement of Taste, may be Described, in a few words, as consisting in Directions to the Students for Studying, in the First Place, the Beauty and Grandeur of External Nature—next, the Best Models of Composition, in the Departments of Poetry, Eloquence, and History—and, Lastly, the Principles of the

Art of Criticism; the whole being accompanied with such Examples, and Illustrations, as seem best adapted to assist the Comprehension and Memory of those who are least advanced in Age. There is another Object, too, Promoted by the Copious Manner of Elucidation to which these Subjects naturally invite the Teacher. The Students are, thereby, Supplied with Abundant and Suitable Topics, for Writing Exercises on such Questions, or Doctrines, as may be Suggested in the Course of the Lectures, or Prescribed by the Professor, agreeably to the System followed out in his Class.—As, however, it is not pretended that the Lectures, now to be Described, contain any thing New, either in Plan or Execution, a mere Sketch, or Outline, of them is all that can be Required, to answer the Purposes of this Work.

ON THE STUDY OF THE BEAUTY AND GRANDEUR OF EXTERNAL NATURE.

The Professor will find little difficulty in Collecting Materials for his Lectures, on this Division of his Subject. The Beautiful and the Grand, in the Material World, have been favourite Topics both with Ancient and Modern Authors;

and they are usually found to Seize the Attention, and Awaken the fancy, of the Young, even without the Aid of Scholastic Discipline, or the more Powerful Influence of Example. The Natural Phenomena which Exhibit these Qualities, in their more Striking Characters, have uniformly laid the First Hold of the Rising Powers of Taste and Genius; and, Aided by the Emotions of Love and Admiration, which they never fail to Excite, they have, in most cases, called forth the First Fruits of these Mental Endowments, whether in Poetry or Prose. The Habits and Associations, too, of those who enter a First Class of Philosophy are extremely favourable to the Development and Culture of the Powers of Taste. They have just arrived, so to speak, from the Classic Regions of Ancient Greece and Italy; where their Taste and Imagination could not fail to have been, in some degree, Awakened, by the Fine Scenery, the Lofty Conceptions, and the Beautiful Descriptions, which Characterize the Literary Productions of those Celebrated Countries.

The Chief Care of the Teacher—and he will find it attended with some share of Difficulty—will be to Select such Phenomena as are most likely to call forth the Interest of his Pupils, and to Suit the great Diversity of Taste and Talent which may be expected in a Numerous Class. In many instances, too, he will have to make the First Im-

pressions, and to create in their Minds the First Emotions, connected with such Pursuits. He will have to Overcome Indifference in Some Individuals; and, in a Greater number still, he will have to clear the Mind of those Obstructions and Obstacles which arise from Perverted Habits, and from Prevailing Trains of Thought, Foreign to the immediate Object of Study. He will, for this purpose, exert himself to make Young Persons feel that they must not expect to succeed in this Department, without Carrying with them, to the Field of Observation, a Mind not only Free and Disengaged, but even previously Prepared to Receive those Impressions which the Beautiful and Sublime, in the Works of Nature, are calculated to produce. It is not merely to Know, or to form Conceptions of the Objects to which their Attention is Directed; it is, moreover, to Receive Impressions, to be Animated with a Specific Emotion, occasioned by the Presence of these Objects: and nothing is more certain than that such Impressions and Emotions cannot find a place in that Mind, which, at the Moment, is either Pre-occupied with other Thoughts, or Agitated with other Feelings. When the Mind is engrossed with Pursuits, or led away by Trifles, the Magnificent Picture of the Material World is only a Blank, equally Unmeaning and Uninteresting. Objects the most Beautiful and the most Grand, on the Earth, and in the Heavens, pass Unobserved. The Landscape has neither Colour, nor Features, nor Character. The Sun

Rises in his Glory, but is not Perceived: he Sets in all the Gorgeousness of a Summer's Eve, and Surrounded with his Robes of Light and Brilliancy, and yet the Heart remains Untouched. The Teacher will, therefore, Endeavour, in the First Place, to Remove these Impediments, and to send his Pupils forth into the wide Fields of Nature, already fitted to Receive, and to Enjoy, the Impressions Produced by the Beautiful and the Grand.

But the Director of Youthful Studies has it not only in his Power to Select, and Recommend, the Objects which are best Calculated to Awaken and Improve the Taste of his Pupils, but also to Strengthen those Powerful Associations which, even more than the Direct Objects themselves, Excite the Latent Powers of Genius, and Lead the Imagination into New and Pleasing Trains of Thought. For example, let a Mind, duly Prepared for Contemplation, be Directed to Observe, in a Fine Summer Morning, the Rising Sun, coming Gradually and Majestically into View, and thereby Changing altogether the Face of Nature. The Direct Effect produced by the presence of this great Luminary is, no doubt, one of the Deepest Emotions of Wonder, Admiration, and Delight; but how greatly are these Feelings Enhanced by the Introduction of other Ideas Naturally and Closely associated! The Mind is instantly raised to the Contemplation of that Almighty Power which Called the Glorious Being into Existence, and Stored him with

that Inexhaustible Treasure of Light and Heat, which flow from him with inconceivable Velocity, Pervading and Supporting the Numerous Worlds which move around him. From this, the Eye passes to the amazing Change which His Presence has produced upon Animated and Inanimated Nature, to the Gay and Beautiful Colouring spread over the whole Creation. Then, the Ear listens to the untaught Hymn which Breaks forth spontaneously from the infinite Tribes of Animals, which owe their Existence, and the Main Source of their Pleasure, to his genial Rays, as the Instrument of Creative Goodness and Bounty. Other Objects, and other Associations, still, present themselves to the Contemplative Student. He beholds Man himself, Called as it were into new Life by the return of Day, and, in the full enjoyment of his Hopes, and Energies, sending forth his more Rational Strain of Devotion and Gratitude. Thus, the Direct Emotions which the Object itself produces are Multiplied a Thousand fold by the Power of Association; every Related Idea, in this case, contributing part to the general Sentiment of Delight and Joy. Nor is this all. The Mind is not Satisfied even with Rapturous Emotions, considered as an Ultimate Object; on the contrary, it is prompted to Inquire, to Investigate, to Conjecture, to Collect Facts, and to Draw Inferences; to look Beyond what is Seen to Something which does not meet the Senses; and thus, not Unfrequently, the Young Man of Genius is Conducted from Feeling

to Science, and from the Exercise of Taste to that of the Understanding. In Minds of a Different Cast, such Converse as we have now described with those Objects "whose Line has gone out "through all the Earth, and their Words to the "end of the World," proves the Occasion of deep Enthusiasm and Poetical Inspiration, and sometimes gives birth to the noblest Works of Art. It creates a Frame of Mind Similar to that alluded to by the most Musical of English Poets, who said, "He Lisped in Numbers, for the Numbers Came."

It is unnecessary to state, at greater length, the General Tenour of the Lectures by which the Student, in the First Philosophy Class, is Directed, in his Inquiries, into the Grandeur and Beauty of External Nature, as Objects of Taste; and by which, also, he is assisted in Cultivating those Powers and Susceptibilities of Mind, which constitute the Channel through which these Qualities are Perceived, and Enjoyed, by the Human Being.

ON THE IMPROVEMENT OF THE POWERS OF TASTE BY THE STUDY OF COMPOSITION.

It requires no Proof to establish the Position, that the Powers of Taste, in Youth, are improved by examining Good Models in Poetry, Eloquence,

and History; and the Teacher, as has already been remarked, is possessed of the Means not only of Presenting the best Specimens of these, in his Lectures, but also of Expounding the Principles, and of Displaying the Skill, which are to be traced in their Composition. When the Young Artist in Painting, or in Sculpture, has received Instructions, even from the Ablest Masters, he still finds it necessary to Travel into those Countries where finished Models are to be seen; convinced that he will Learn much, from the Study of these, which cannot be taught by Rules, nor conveyed by Description. Thus, one Eminent Painter, after having made, as he thought, great Proficiency in his Art, went to Rome for the purpose of Examining the fine Pictures which adorn that Celebrated Metropolis; and he was often, afterwards, heard to declare that, till then, he knew "nothing of his Art." The Student in Poetry, in Eloquence, and History, is not, indeed, under the Necessity of Travelling into Foreign Lands in Search of Excellent Models. But he may, notwithstanding, require Assistance and Direction, in Studying them to Advantage, even when put into his Hands; and, in this part of the Lectures, accordingly, it is the Object of the Professor to Instruct him in the Proper Method of Reading, and of Imitating these Models, for the Improvement of his Taste. Nor is it a Slight and Superficial Acquaintance with Approved Authors that will Serve this Important

Purpose. The Student must have them Present to his Mind, in Regulating his Trains of Thought, his Modes of Expression, and, above all, his Use of Ornament, and Rhetorical Figures; for, without an Intimate and even Minute Knowledge of the Best Literary Productions, it is as impossible to acquire a Good Taste as it is to acquire Ease and Elegance of Manners, without a Familiar Intercourse with Good Company.

The Student is supposed already prepared for a Critical Perusal of the Greek and Latin Classics, by his previous Knowledge of the Language in which they are composed; but, as he is also to Study English Authors, and to Compose in the English Language, it is absolutely Necessary that he should make himself fully Master of the Grammar and Structure of that Language. It Continues, however, notwithstanding some Recent Improvements, to be a Reproach on British Education that, whilst the Minutest Parts of the Ancient Languages are Taught, and occupy a Considerable Portion of the Time allotted for Study, both at School and in College, the Language in which we ourselves Speak and Write receives Comparatively little Attention. Before, therefore, I enter upon the Study of English Composition, and by way of an Introduction to it, I have thought it necessary to impart, in the Lectures, such Instructions, in respect to the English Tongue, as will prepare my Pupils for Understanding the various

Principles of Composition, in general; and, particularly, for producing the several Specimens of their own Skill in that important Art, which are regularly required at their hands. In pursuance of this Object, they are first made acquainted with the Origin and Component Parts of the Language now mentioned—its Structure, and Peculiar Qualities, as compared with Other Languages—its Prevailing Idioms—the Principles which Regulate the Position of Words in Sentences—the Nature, Diversity, and Requisites of the Principal Kinds of Style—the Causes of this Diversity—the Means of forming a Correct Taste in Composition, with such Illustrations as these several Topics require. The Order in which these Subjects are Explained, in the Lectures, is stated in a short Synopsis of the Course, published for the Use of the Students; on which account, any farther Details, in this place, are quite unnecessary.

It has been Objected, I am quite aware, that such Topics Ought not to be ranked among the Pursuits of Philosophy; as being only suited to the Dissertations of the School-room, or for entering into the Pre-lections of a Classical Tutor. No Argument has yet been Advanced, however, to make me change my Opinion that the Philosophy of Language is better fitted than any other, at a certain Stage of the Student's Progress, to Open his Mind, and to Further his General Improvement. It should be remembered that the

Inquiries, on this Head, are not Confined to the mere Properties, or Offices, of the different Parts of Speech, but, on the contrary, Extend to the Consideration of the Connection which subsists between these External Signs and the Mental Operations which they Denote—to a Comparison of the Matter with the Language in which it is clothed, and the consideration of their Reciprocal Influence upon each other—to an Examination of the Principles which, in different Languages, give occasion to Peculiarities in their Arrangement—and, lastly, to Diversity of Style, as founded upon Varieties in the Character and Talents of Individuals, or of Nations. These Subjects, and others connected with them, may, it is imagined, furnish a Selection of Materials, which will afford a Constant and very suitable Exercise for the Intellectual Powers of the Student, at this Early Period of the Philosophical Course. Having finished the Lectures on these Elementary Topics, I proceed, as has been already Explained, to set before my Pupils the best Models of Composition, in the several Departments of Literary Skill and Enterprise, as specified in a preceding Paragraph.

Composition, as it respects the Subject-matter of it, has been divided, by Lord Bacon, into Three Classes, according to the Three Principal Faculties of the Understanding, Memory, Reason, and Imagination. In the First Class are comprehended all Historical Compositions, of every Form, and on

every Subject. All Philosophical Compositions, by whatsoever name they are called, belong to the Second Class; and to the Third All those Works, whatever be their Description, in which the Faculty of Imagination is chiefly, or almost wholly Exercised. It does not appear to me that there is any thing gained by this Division, either in point of Accuracy or of Clearness; for there is no Composition, under any one of these Three Heads, which could possibly be Executed without the Use of all the Three Faculties, upon which the Classification is founded. At any rate, how Scientific soever it may be, it proceeds on Principles much too General; is altogether Unsuitable to the Purpose of these Lectures; and is ill calculated for giving Assistance to Young Students in forming their Judgment on Works of Literature, on the Specific Character of the Various Orders of Writing, whether in Poetry or Prose, and on the Merits of Individual Compositions, regarded with a Reference to the acknowledged Canons of Criticism.

With a View to the Object of Lectures, in a First Philosophy Class, Literary Composition may perhaps be more Usefully divided; 1st, According to the Particular End proposed to himself by the Author of the Work; 2dly, According to the Nature and Qualities of the Materials Employed by him for that Purpose; 3dly, According to the Form which these Materials are made to

Assume, and the Principles of Arrangement adopted in their Distribution; and, 4thly, According to the Particular Style in which the Composition is Executed.

It is very Obvious, indeed, that no Just or Adequate Notion can be formed of any Composition, or any Judgment pronounced on its Merits, without our first having the Means of Comprehending the Design of the Writer. To that every Part must bear a strict Reference and Relation; and, whatever be the Nature of the Materials, they must, at least, possess the Particular Qualities necessary to Effect the End in View. Again, however judiciously the Materials may be Selected, they must also be Arranged, and Disposed, on Principles Calculated, in like manner, to Accomplish the Object of the Work: and, in Addition to all this, it is very Manifest that the Style, or Peculiar Choice of Language, which the Author Employs, must be Adapted, at once, to the Nature of the Materials, and to the General Design intended to be Realized.

The Standard, Implied in this Method of Classification, may be Extended to Compositions of every Kind and Form, whilst it affords the best Means for Ascertaining the Genius and Skill of an Author in every part of his Work;—his Powers of Invention, Arrangement, Argumentation, Narration, and Description;—and the Details on these

points, as delivered in the Lectures, are meant to Assist the Student in forming a Correct Judgment, with regard to the Structure and General Merits of the most Approved Works, in History, Poetry, and Eloquence. As an Example of the Manner in which this is attempted, but without entering into the Minute, and Familiar, Illustration indispensable in Lectures addressed to very Young Men, I shall here introduce a few Remarks on Epic Poetry, one of the most difficult kinds of Literary Composition.

In the Outset, the Student is directed to Form an Acquaintance with the Author, byEntering into his First Conception of the Particular Work, submitted, for this purpose, to his consideration ; and afterwards, to Follow him Closely, in every Train of Thought, in every Suggestion of Fancy, and every Correction of Taste, which fills up the Space between the Design and the Execution. In doing this, the Young Student is likely to take a Greater Interest than he would otherwise feel, in the Progress of the Poem. The Subject gradually Opens and Extends before him ; and, by having a Clear Conception of the General Plan, he will necessarily acquire more Distinct Notions of the Subordinate Parts, as they are Successively Developed. Suppose the Instance fixed upon to be the Iliad of Homer, the great Model and Standard of Epic Compositions. On the Mind of Homer, then, Distinguished as it was by Vigour of Imagination, and

Powerful Sensibility, the Great Events, and Splendid Achievements in the Trojan War, may be conceived to have made a deep Impression. His Active Fancy, it is very probable, would often Wander amid the Scenes of Heroism and Glory, which are Associated with that Memorable Event, and insensibly Contract that Ardour and Enthusiasm which first prompted his Great Undertaking; and, at this Stage of his Progress, or rather upon this Original Suggestion of his Attempt, the Student is directed to Examine, along with the Author, who may now be imagined to be so employed, into the Fitness of the Materials, hereby presented, for the Subject of an Epic Poem; their Remoteness from his own Time; and the Interest with which they would be viewed by the Mass of his Countrymen, as Descendants of the Grecian Heroes.

It is even probable that the Poet's Ardent and Adventurous Mind may have prompted him to the Execution of Detached Parts of this great Work, before he had fully Completed his General Plan; and that it was only as he proceeded in Dressing up his Scanty Materials in the Rich Garb of Poetry, that the Various Incidents, which constitute so much of its Charm and Interest, were successfully suggested to his Mind. A Vigorous Imagination, it is well known, trusts to its own Creations more than to the Real Events, or Actual Occurrences, upon which it Exerts its Powers:

thus, the Poem of Paradise Lost is built upon a Few Hints, taken from the Sacred Scriptures.

The General Plan of the Poem being Conceived, and the Course of Action being Sketched out, it next devolves upon the Author to Connect these with such Characters, selected from among the Heroes of his Story, as will Realize, in the most proper manner, the several parts of the varied Enterprize, which he has undertaken to Commemorate. In this respect, Homer enjoyed very Singular Advantages; for Tradition had brought down, to the Times in which he lived, not only the Splendid Events of the War which he had chosen for his Subject, but also the Names, the Rank, and Genealogy of the several Persons to whose Valour or Wisdom these Events were Ascribed. Such Actions, again, could not be performed without the Accompaniment of Others of a Subordinate Nature, requiring, of course, Characters of an Inferior Order to Execute them. In the Structure of the Epic, accordingly, a certain number of Detached and Separate Actions, performed at Different Times, and in Different Places, may be permitted to share the Interest and Attention of the Reader; but in such a Manner, at the same time, as not to Violate the Three Unities, as they are called, of Action, of Time, and of Place. The Execution of the Principal and more Difficult Parts of the Enterprise is uniformly Assigned to One Personage of Superior Rank, Abi-

lity, and Character. It is not to be Inferred, however, that the Strict Observance of these Rules is Absolutely Essential to an Epic Poem; for they have been frequently Violated, by Authors of Great Eminence, without Impairing, in any Degree, the Interest of their Works.

In following out the Leading Principles of this Species of Composition, it is still farther to be observed that, as Great and Valorous Actions naturally imply Difficulty, and Dangers, in the Execution of them, the Poet, with the view of Engaging our Sympathies, and of Raising our Estimation of the Courage and Perseverance of his Heroes, contrives to link together such a Combination of Events, as will give Ample Scope for Displaying all the Fine Qualities, and all the Noble Principles, which ought to Distinguish the Chiefs of the Epic. As, however, the Reader would be disappointed and grieved, were the Principal Actors to sink under their Difficulties, or to be left struggling with Misfortunes, the Course of Events must be so Arranged as to lead to a Natural and Gradual Extrication from every Untoward Adventure, and to bring the Enterprise, in due time, to a happy Conclusion. These Qualities, too, in point of Action, Character, and General Result, must be crowned with the additional recommendation of Virtuous Motive, Disinterestedness, and Magnanimity, on the part of the

Actors; at least on the part of Him who is Dignified with the Title of Hero.

These General Principles of Epic Poetry, which have been frequently Illustrated by Writers on Criticism, are Derived from an Examination into the Works of Homer; in whom Genius and Judgment were Combined, in singularly Happy Proportions. His Genius, for example, is strikingly displayed in the Grand and Comprehensive Design of his Poem; whilst his Judgment is no less manifested, in Confining the Action to the Busiest and most Interesting Period of the Trojan War; Uniting thus, in his Plan, and bringing forward, in his Details, every thing that could lay hold of the Affections, the Prejudices, and the Vanity of his Countrymen; and, at the same time, give Pleasure to Cultivated Minds, in all Countries, and in all Succeeding Ages. Nothing, indeed, could afford a higher Idea of the Power of Imagination, regulated by a Sound Judgment, than the Invention of so many Characters as are exhibited in the Iliad—all so admirably calculated for the various parts assigned to them,—all possessing Valour and Courage, as their Predominant Qualities, while they are, at the same time, distinguished from one another by a certain Peculiarity of Disposition and Manners. So closely Consistent, and so naturally Allied, is every Character with the Actions Performed, and with the Sentiments Expressed, in every Combination of Cir-

cumstances in which the several Personages are placed, that it is scarcely necessary to Introduce them to the Reader by Name. In all situations, each speaks, thinks, and acts, in a Manner peculiar to himself; and in such a Manner, too, as to Distinguish him Completely from every Other. Achilles is Brave; and Hector is Brave; so are Ajax, Menelaus, and Diomede; but the Bravery of Hector is not of the Same Kind with that of Ajax; and no one will mistake the Battle-Shout of the Son of Atreus, for the War-Cry of the Son of Tydeus.—To connect all the parts together, and to make the Various Events, and Incidents, of the Story bear upon the Main Design of the Poem, Homer fixed upon the Resentment of Achilles; as being the Source from which all these Events, and Incidents, took their Rise, more or less directly, and to which the Principal Exploits of his Heroes bear, throughout, a Constant Reference.

With regard to the Fiction of Poetry, as Sanctioned by the Practice of Epic Writers, it would be Superfluous to enter into much Detail, in these Outlines. The Student is reminded that this Species of Poetical Licence is not confined to the Introduction of Supernatural Personages, but may be extended to Every Part of the Design, as well as to Every Part of the Execution; Enlarging what is Contracted, Raising what is Low, Embellishing what is Beautiful, Removing what is Defective

or Unbecoming; and thus acting in subserviency to the Main Object of the Poet, viz. the Excitement of Wonder, Delight, Admiration, and Love, in the Mind of the Reader. Events, Characters, and Manners; the Dangers of the Field; the Triumphs of Victory; the Horrors of Servitude; the Lamentations of the Vanquished; and the Generous Clemency of the Conqueror, are, all, within the reach of this Magic Power.

The Origin of Fiction in Poetry is, no doubt, to be traced to the Wish, which so naturally occurs to the Mind of a Poet, to overcome that Indifference with which we Contemplate such Ordinary Characters, and Actions as are to be found in History; and this Violation of Strict and Literal Veracity seems, in a great measure, justified by the Powerful Influence which Sentiment Exercises over the Imagination; it being, in some instances, of Equal Strength with the Impressions derived from External Objects, and even, in certain cases, Superseding the Function of Sense, and Obliterating the Traces of Consciousness. The Range of this Licence, however, although Extensive, is not Boundless. The Poet is expected to Regulate the Use of Fiction, by the Particular Object which he professes to have in view, in the Composition of his Work: and, in every case, he must Adhere, in his Poetical Creations, to what is Natural, Probable, and Consistent. It is not easy to Define more exactly the Limits

which ought to Divide Truth from Fiction, in Epic Poetry; for as this is the Field in which Genius displays most its Power, and its Taste, the Laws of Criticism, as they will not be Regarded, ought not to be too strictly Enforced.

The Student is next instructed in what is Technically called the Machinery of an Epic Poem; or the Occasional Introduction of Divine Persons, Directing, and Assisting, the Endeavours of Favourite Mortals. This practice, obviously originating in the Mythology of Ancient Greece, is represented, in the Lectures, as attended with both Advantages and Disadvantages. There can be no doubt, on the One hand, that it has given occasion to much Sublime Description in Homer, and in the Other Epic Poets who have followed his Footsteps, in his Manner of Writing, as well as in the Choice of a Subject; but it may be fairly questioned, on the Other, whether it has not Detracted very considerably from the Admiration which would otherwise have been bestowed upon Human Energies, left to their Natural Vigour and Foresight. After a Comparative Statement of the Good and Bad Effects attending the Use of Pagan Machinery, some Remarks are added, on the Influence which it Exerts on the Minds of Young Men, in the course of their Literary Pursuits, to whom the Study of it has been recommended with much Ingenuity and Eloquence. The purer Dispensation of the Christian Religion, indeed, Precludes, in a

great measure, all Modern Poets from Using, at least with any prospect of success, the Machinery so freely employed by the Ancients; and to me, whatever may be the Opinion of Critics, it has always appeared an Indispenable Duty to Endeavour to Strengthen, in the Minds of my Pupils, the Power of Reason, even in Matters of Poetry, and to Establish its Supremacy over Prejudices, and Prepossessions, of every Description. In no other way will Young Persons be prepared to Receive the Good, and to Avoid the Evil, so closely connected with the Doctrine in Question.

This account of the Principles of Epic Composition is brought, in the Lectures, to a close with Remarks—on the Introduction and Use of Episodes—on the Rules of Arrangement in Epic Poetry —and on the Various Qualities of Style requisite in this Species of Writing.

The Explanation given, in the Lectures, on these Subjects, and on others nearly allied with them, necessarily leads the Teacher to bring before the Student such Doctrines, and Illustrations, as will throw some Light, not only on Epic Poetry, but on Poetical Compositions at large, and even on History, whether Real or Fictitious. In forming a Judgment of these, and indeed of all other kinds of Writing, the Foundation of Criticism will, as has been stated above, Respect

the Object, or Purpose, of the Author—the Quality of the Materials which he brings forward to accomplish his End—and the Skill which he Displays in their Arrangement; together with the Propriety, and Eloquence, of the Language in which they are Embodied. Philosophical Composition, whether in the way of Analysis or Synthesis, or according to the Scholastic Method of Syllogism, has been already explained, under a former Division of the Lectures. Here, too, the General Rules just mentioned will be found to Apply, when merely modified by the Simple Observation that, as the Subjects, in this Department, are strictly of an Intellectual Nature, turning upon the Relations of Things, as they present themselves to the Understanding, and not to the Imagination, so that Arrangement will be the Best, which contributes most to Clearness and Accuracy of Investigation; and that Language the most Suitable, which expresses the Different Processes of the Mind, with the least Ambiguity.

ON THE IMPROVEMENT OF THE POWERS OF TASTE BY THE STUDY OF CRITICISM.

With the View of Improving the Delicacy, and Discernment, of his Taste, the Student is

directed, in the last place, to a judicious Examination of those Rules, which Observation and Experience have Established, for the regulation of the Judgment, in Matters of Literature and of the Fine Arts. These Rules, it is hardly necessary to observe, do not precede, in the Order of Time, the Appearance of Excellent Specimens in Poetry, History, and Painting; but are, on the contrary, derived from a Critical Perusal and Examination of these Models, and afterwards promulgated for the Guidance of such as rather Imitate than Invent. Many fine Specimens of Reasoning and Eloquence, for example, existed, before the Rules of Logic or of Rhetoric had Assumed a Regular Form; and the Works of Homer had gained the Admiration of the World, long prior to the time at which Aristotle composed his Art of Poetry. In short, it was by observing what some Authors had done, with General Approbation, that Writers on Criticism were enabled to point out what ought to be done by others.

The Pleasure received from the best and most approved Works, in Literature and the Fine Arts, and the General Admiration bestowed upon the Powers of Genius which produced them, must have soon excited Attention to the specific Nature and Source of that Pleasure, as connected with the Faculty of Taste in the Human Mind.

Hence, the Origin of the Art of Criticism; in the very commencement of which it would be perceived that, with Certain Discrepancies arising from Defective Instruction or Early Associations, the Opinions of Men on the Qualities of Composition, or other Works of Art, exhibited a Striking Uniformity; that, in general, they agreed in calling the same things Excellent or the Contrary, and in receiving, from the Perusal of them, a similar Emotion, whether of Satisfaction or Dislike. Thus, in process of time, from Examining into a great variety of Instances, and from Ascertaining with Precision that which Pleased or Displeased, in particular cases, a Set of Rules would be constructed; directing what ought to be done and what ought not to be done, and thereby founding the distinction, upon the Basis of Principle, between Good and Bad Taste.

In Prosecuting his Studies, in this Department, there is no Quarter to which a Young Person will be more likely to go for Assistance or more likely to obtain it, than to Standard Works of Criticism. Those who have gone before him, in the Path in which he wishes to tread, and who have travelled in it prosperously, are no doubt well Qualified to Direct him, as to the Manner in which he ought to Proceed. It is Expedient, however, to inform him that even under this Enlightened and Experienced Direction, he must proceed with Caution; and, in his First Acquaintance with

Works of Taste, he must be Reminded to make but a Sparing Use of the Technical Forms and Maxims of the Professed Critic. The Respect due to Great Talents and to Superior Knowledge is apt to dispose Young Minds to receive, with Implicit Confidence, the Opinions of Established Writers, and to deter them from sufficiently Exercising their own Understanding and Natural Sensibility. The Student should, therefore, in the First Place, attach himself to the Unassisted Perusal of the Best Models; forming such Opinions as his Judgment may Sanction, and Cherishing such Emotions as the Subject of itself may happen to Excite. He must not go to the Critic to learn what ought to Please or Displease, or when to Approve and when to express Disapprobation. His part is, to begin with Thinking and Feeling for himself; and then to compare his Opinions and Feelings with those which bear the Stamp of Authority and of Established Taste. The General Object of the Lectures, indeed, on this particular Head, is to Instruct Young Men at what Period, in what Manner, and with what Views, they ought to Apply themselves to the Study of Critical Writers; how they may derive from such Authors the Assistance and Direction of which they may stand in need; and how they may Escape those Errors and Mistakes to which they are Exposed, both from not Understanding, and from Misapplying, the established Rules of Criticism.

The Student is here taught to view in its proper light the Objection which has been sometimes urged against the Critical Art, as being Prejudicial to Rising Genius. It is remarked, in Answer to this Cavil, that the Knowledge of Rules founded upon the Constitution of the Human Mind, and collected from the Works of Judicious and Enlightened Authors, cannot possibly be Hurtful to Taste, nor check the Exertions of Youthful Talent. On the contrary, such Knowledge Communicated at the Proper Time, and Used with Discretion, can hardly fail on many important occasions, to correct Mistakes, to supply Deficiences, and to suggest Improvements, in their General Reasonings, as well as in their Perception of the Higher Qualities of Composition. It ought accordingly to be a Leading Object with every Professor, to Adapt his Instructions so as not only to Convey Useful Information upon the Subjects which he himself actually discusses, but more particularly to prepare his Pupils for Reading, with Advantage, the Publications of those Writers, whose Opinions are most Approved, and who are usually recommended as Guides, and Patterns. Such Authors may, indeed, be regarded as Constituting or Expressing that General Standard of Taste by which Public Opinion is Regulated; and in becoming Acquainted with their Works, the Young Student, so far from Suspending the Exercise of his own Judgment, merely Investigates the Grounds upon which their

Conclusions are Supported, and Compares their Doctrines with the Simple Dictates of his own Mind.

Indeed, the Great Object of the Professor, in this Stage of his Course, will be to afford to his Pupils, from the Various Sources which Reading and Reflection have afforded him, the Means of Forming for themselves a Standard of Taste, to which they may refer such Productions of the Fine Arts, as fall under their Observation. And, in Pursuance of this End, he will naturally State to them, that Writers on Taste have Endeavoured to Establish such a Standard on the Basis of General Consent, modified by such Circumstances as will render this Consent Definite and Apparent. In every Nation, it is true, and in every Age of the World, there have been but a Small Number of Individuals, comparatively speaking, whose Habits and Pursuits have led them to examine into the Principles of Taste, or even to Attain any Practical Acquaintance with the Productions of Genius, in Poetry, Sculpture, or Painting. In Particular Countries, too, and Epochs of Society, the General Taste has been Vitiated and Depraved. During the Scholastic Ages of Superstition and Ignorance, for example, the Love of the Fine Arts, and a Correct Perception of their Excellencies, were Unknown over the Whole of Europe; and in like manner, under the Government of Charles the Second, the Public Taste in England

was deeply Affected by the Corruption and Profligacy of Manners which, at that Period, characterized the Intercourse of Society.

The Standard founded on General Consent must be still farther Modified by the Licence which is conceded to Men of great Genius, whether as Authors or Critics. Distinguished Writers, and Celebrated Artists are invested with a certain Privilege to Dispense with the Strict Laws of Criticism, in their own Performances, as well as in Judging of those of others; and thus, the Authority of General Consent is frequently diminished in the very Quarter from which it might be expected to derive its Greatest Support. It ought to be remembered, besides, that the Majority of Men of Taste, are Judges only in one Department; that there is no such thing as a Universal *Tact*, that a Person may be a Good Judge in Poetry, and not in Painting or Sculpture; nay, that he may be a Good Judge in one Species of Poetical Composition, and not in another. Under Modifications so Numerous, and Essential, General Consent cannot fail to afford a very Imperfect Standard. It is Sufficient for determining with respect to General Excellence in Matters of Taste; but not for deciding with regard to Minute Points and Rival Beauties. For Example, it has left no room for Doubt, that the Works both of Homer and of Virgil are Excellent, and most Approved Speci-

mens of Epic Poetry; but it has left the Question still Undecided to which of these Great Authors the Palm of Superior Poetical Merit belongs. In these Circumstances, the Student who wishes to satisfy himself, as to the Comparative Excellence of those immortal Poets, must institute a Severe Analysis of the Poems in question—direct his Judgment to the Several Parts, in which Similar Powers are Displayed—compare the Genius, Taste, Sensibility, Imagination, Command of Language, and General Qualities of Style—and, thus, arrive at a Conclusion, guided at once by the Light of his own Understanding, and by the Established Rules of Criticism. The French Critic Rapin has given a good Specimen of this Mode of Determining Comparative Merits; while the Remarks which accompany his Estimate, Instruct the Student not only how to Express his Approval, or Disapproval, but also how to State the Grounds upon which his Judgments may have been Formed.

Such is the Sketch to which I have confined myself of the Substance of the Lectures delivered in the Class, on the Means of Improving the Powers of Taste. One Particular still remains to be stated, which the best System of Instruction and the most Profound Knowledge of the Subject can neither supersede nor supply; namely the Method of Conducting a Regular Progressive

Course of Exercises, performed by the Students, corrected by the Teacher, and afterwards returned to them with Instructions for Directing their Future Efforts. But an Explanation of the Plan, adopted in carrying on this part of the Discipline of the First Philosophy Class, will form the Subject of the Second General Division of these Outlines.

The Lectures on the Powers of Communication containing a theoretical View, and a copious Illustration of the Means of Improving these Powers by the Arts of Eloquence and Rhetoric, constitute no part of the Business of the Students who attend the First Course. These may, perhaps, become the Subject of another Essay.

A General Sketch has now been given of the Subjects of the Lectures, which are Annually delivered in the Logic Class, in the University of Glasgow, and also of the Order in which these Subjects succeed each other, in the general Arrangement of the Course. The chief difficulty in drawing out such a Sketch has arisen from the Necessity of exhibiting a distinct Specification of the several Parts, and, at the same time, of avoiding a Minute Discussion of Topics which are avowedly Common, and therefore familiar to every Person of liberal Education. It is hardly necessary to subjoin that, in the Lectures of which he

has thus Detailed the Outlines, the Author disclaims all Pretence to Originality: indeed, he conceives that attempts after Novelty, and Ingenious Views, in these Matters, would have rendered them only less adapted for the Purpose which they are meant to accomplish.

There will, no doubt, be a Diversity of Opinion whether the Subjects now Described are the Fittest and Best, all things considered, for Initiating Young Persons into the Study of Philosophy, and for Supplying them with the Means of following out the Pursuits which may be thereby Suggested —whether they are the Subjects most likely to Interest and Exercise the Intellectual Powers of Youth—whether they Comprehend proper Topics for Essays to be Performed by Young Men just beginning to Think and Compose;—whether, in a word, the Professor of the First Philosophical Class in the University might not, in some other way, Occupy, to greater Advantage, the Time and Labour of those who are committed to him for Instruction.

It has been thought, for example, by some, not altogether incompetent to judge, that the Science of Geometry, on account of its Clearness and Certainty, is better calculated than any other for accustoming Young Persons to Accurate Reasoning, and for inuring them to Habits of Attention and Perseverance; and this Science, accordingly,

has been Established in some Seminaries, as the Chief Occupation of Young Men, in the commencement of their Studies.

It is readily admitted, that Geometrical Science has a Powerful Tendency to fix the Attention of Youth, and to accustom them to Distinctness in the Use of Terms, as well as to Clear and Accurate Habits of Thought, in appreciating Evidence, and in balancing Arguments: And these Points, it is farther admitted, are so Essential to the Formation of the Logical Character that, if Provision had not been made for them in the Academical Course, I should have thought it necessary to Select, from the Elements of Euclid, a Series of Fundamental Propositions, and to have Introduced them into these Lectures as a Specimen of Close Reasoning. This, however, is rendered unnecessary by the Establishment of a Mathematical Professor, who gives Lectures, every day during the Session, on the Elements of Euclid, of Plane Trigonometry and Algebra; and, at a separate hour, to more advanced Students, on the higher parts of Mathematics, Conic Sections, Fluxions, and the Principia of Newton. As the Students in the Logic Class, generally speaking, attend the Elementary Class of Mathematics, they enjoy all the Advantages that they would otherwise derive from the Introduction of any part of the Latter, into the business of the Former.

Nor could the Object which the Professor of a First Philosophy Class has in View be properly attained, by Confining the Attention of his Pupils Entirely to Geometry. That Science, every one knows, addresses itself chiefly to the Intellectual Powers of Comparison and Deduction; and it is found from Experience that, amid the great Diversity of Human Talents, there are but few Minds which discover any peculiar Aptitude for Geometrical Investigations. Besides, as the Mental Faculties, in their Growth and Progress, Exercise a Reciprocal Influence, and Exhibit a Close Dependence upon one another, it is to be Apprehended that the Partial Direction of some of those Powers, while the rest remained Unemployed, might prove Hurtful to their General Culture. It may, indeed, be Established as a Principle that, whenever, in a Course of Early Education, this Dependence and Connexion are overlooked, one Faculty is apt to acquire such a Preponderance as greatly to retard the Expansion, and Improvement, of all the others. Thus, during the Scholastic Ages, as the whole force of Education was directed to the Improvement of the Powers of Reasoning, many surprising instances of Acuteness and Penetration appeared among the Learned, and thus, in some degree, rewarded the Labour so painfully bestowed upon the Crude and Technical Jargon, by which the Mind was, at that time, Conducted through her Intellectual Processes; but the Bad Effects of this Exclusive and Partial

Manner of Instruction were, at the same time, strikingly manifested, in the total Absence of Invention, in the Decay of Taste, and in the Neglect of the Important Powers of Communication. The Lectures, the Exercises, and the Discipline, of a First Philosophy Class ought, therefore, to be such as will promote equally and gradually the general Culture of the Mind, and the Improvement of every Separate Faculty.

Were the Business confined to the Elements of Geometry, the Students would be Deprived, in a great measure, of all those Means of Improvement which are connected with the Knowledge and Habits of Language, and upon which their Future Progress in Science, and in Art, so intimately depend. Mathematicians, it is well known, make but a Sparing Use of Language. Their Vocabularies are of small Extent; being confined to a few Abstract Terms, Algebraical Characters, and Diagrams. These, it is very obvious, are not only restricted to one Science, but are suited to call into Exercise only One Class of the Mental Powers: whereas, in every Period of Education, from the First to the Last, the Study of Language, including, of course, the formation and expansion of those Associations which connect Thought and Feeling with Verbal Signs, whether as used by the Orator, the Poet, or the Philosopher, gives full Scope and Exercise to all the Intellectual Endowments,—calls

into Play the Imagination, the Memory, and Reason—and gives Birth to those rapid Processes of Thinking, Speaking, and Writing, which distinguish the accomplished Scholar and the intelligent Man of Business.

The very Perfection of this Science, and the vigorous Intellectual Efforts necessary to reach it, in some measure disqualify it for becoming the Basis of a First Class of Philosophy. Every Step in the Process is equally clear and certain. There is no room for Diversity of Opinion, Doubt, Conjecture, Hypothesis, or Theory. All must travel in the same Beaten Path, and the farther the Students Advance, the more is their Entrance Contracted. Those who have arrived at the highest parts of it, have few with whom they can converse.

It has been already admitted, that the Study of Geometry has a Tendency to produce Habits of Regular and Steady Attention, and to accustom Young Persons to Form their Judgments, on Clear and Certain Evidence. This, however, it must be observed, is not the Kind of Evidence with which they will be chiefly Conversant, in prosecuting other Branches of Science. The Conclusions of the Geometrician are founded upon Truths, either intuitive or demonstrable; whereas, in Ethics, Politics, Jurisprudence, Criticism, and Theology, our Reasonings are Supported upon

different Principles, and are Sustained by quite a different Species of Evidence. The Mathematician cannot proceed one Step without the Aid of Demonstration; while the Student, in other Departments of Human Research, must rest satisfied with Certain Degrees of Probability, and even with Conjecture. There is, accordingly, no small hazard that the Young Mathematician may acquire such Notions of Evidence as will completely disqualify him for making Progress, in other Branches of Study. Indeed, there have been many instances of able Writers, who, having formed their Habits of Reasoning on Geometrical Principles, and having acquired a Predilection for the Kind of Evidence on which that Science rests, have absurdly attempted to carry them into Discussions which did not admit of their Application: and there have been not a few distinguished Mathematicians, so devoted to their Favourite Pursuits, and so insensible to the Charms of all others, as not to have shewn any relish for Poetry, Eloquence, or the very Rational Studies of Taste and Criticism.

It is not meant to be insinuated, however, that there are not many Minds of sufficient Strength, to resist this Tendency to an exclusive and bigotted Attachment. On the contrary, it is most readily admitted, that there are many Individuals, and I have the pleasure of knowing some of them, who are not more distinguished by their Geome-

trical Knowledge than by their Acquirements, and the Strength and Soundness of their Judgment, on other Subjects. But no general Conclusion is to be drawn from Particulars; and I have likewise known several persons, highly distinguished by Mathematical Attainments, who were to be ranked even below Mediocrity, in more Common Studies. At all events, it is Certain that, in every Case where the Time and Attention are chiefly devoted to Geometrical Inquiries, and where a Strong Taste is contracted for these Pursuits, not only will a Reasonable Portion of Study be denied to other Departments of Learning, but even a Certain Degree of Indifference, or of Dislike, to these, will be permitted to grow upon the Mind, and ultimately to Disqualify the Student for entering upon them with Success.

These remarks are not to be considered as Applicable to the Science of Geometry, viewed as a Separate Branch of Human Learning, but solely to the Use which is sometimes made of it, as an Introduction to Philosophical Education. Its Unbounded Utility in Extending the Sphere of Physical Knowledge; its Dignity and Sublimity as an Instrument of Thought, in the very highest Tracks to which Intellect Soars, in the Search of Truth; and its general Subserviency to the most Exalted Pleasures which Reason, enlightened and refined, is capable of Enjoying, are neither doubted nor denied. It is, in no respect,

derogatory to this noble Science, nor can it be construed as implying the Slightest Impeachment of the Wisdom of those who Introduced it, at a Certain Stage, into the Academical Course, to maintain that there are other Subjects, in the wide Field of Human Learning, better fitted for the Purposes of a General Education. Why should all the Students in a University, however Different their Abilities, their Taste, their Circumstances in Life, and Future Destination in the World, be obliged to follow one Particular Line of Study, beginning, and ending, in the Principles of One Science? I have often wished that some of those able Men who support this View of Things, in Relation to the Materials of Public Instruction, would take the trouble to point out wherein consists the Connection between the Study of Mathematics and the General Culture of the Mental Powers; and, particularly, between the Higher Parts of Geometry, and the mode of Studying Ethics, Politics, Law, Jurisprudence, Theology, and the Fine Arts,—the Sciences, so to call them, of Business, of Human Life, and of Manners. We certainly do not find that Philosophers, Divines, Legislators, Orators, or Men of Business, are particularly distinguished by their Acquisitions in this Science; and we seldom hear them, where they refer to their Education and acquired Knowledge, ascribe their Success to Geometrical Skill, or to a minute Acquaintance with Algebraical Analysis. It is, on

the contrary, to Studies of a more General Tendency, to Language, History, Eloquence, Morals, and Law, that they are usually found to Attribute whatever Art may have added to Nature, in Strength of Talent, or in Command of Resources.

Nor is it a satisfactory Answer to these Remarks to say that, when Young Persons have once been Accustomed to Reason closely, on Mathematical Subjects, this Improved Habit may easily be Transferred to Subjects of every other Description. Such Transferences are not so easily made as seems to be imagined. When Persons, as has been already remarked, have been accustomed to Exercise the Reasoning Powers, on any Particular Class of Objects, there arises an Inclination, and an Aptitude, to Employ them in that Way, and not in any Other. This is a Fact fully confirmed by Experience.

The same Views which have been here given of the Study of Geometry, as Unfit for the Business of a First Class of Philosophy, seem to have been entertained by Dr. Warburton—a name high in Literature. In his Introduction to JULIAN, he thus expresses himself. "But the truth is, all its "use seems to be only habituating the Mind to "Think Long and Closely, and it would be well "if this Advantage made Amends for some In-"conveniences inseparable from its Study. It

"may seem too much a Paradox to say, that long "habit in this Science incapacitates the Mind for "Reasoning at large, and especially in the Search "of Moral Truth. And yet, I believe nothing "is more certain. The object of Geometry is "Demonstration. Its Subject admits of it, and it "is almost the only Subject that doth. In this "Science, whatever is not Demonstration goes for "nothing, or is at least below the Sublime In-"quirer's regard. *Probability* through its almost "Infinite Degrees, from simple doubt up to ab-"solute certainty, is the *terra incognita* of the Geo-"meter; and yet, here it is that the great Busi-"ness of the Human Mind, the Search and Dis-"covery of all the Important Truths which con-"cern us as Reasonable Beings is carried on. "And here too it is that all its Vigour is Exerted, "for to proportion the Assent to the Probability "accompanying every varying Degree of Moral "Evidence, requires the most enlarged and sove-"reign Exercise of Reason."

We, therefore, repeat an observation which has been made above, that Young Persons ought not to be subjected to an Unfavourable Bias, particularly at an Early Period of their Education; a Bias tending, as all such Biasses must tend, to Preclude or Retard the Progressive Culture of the Mental Faculties.—It is presumed, then, that the Plan of Study here sketched out, as the Course pursued in the First Philoso-

phy Class in this University, combines the Two great Objects of a liberal Education; for the Student is trained in such Exercises as seem best fitted to Occupy and Improve the Power of Reasoning, whilst, at the same time, he is Conducted to the Knowledge of such other Subjects as form the Basis of every Art or Science, in which he may be afterwards Engaged.

ON THE SUBSTITUTION OF NATURAL PHILOSOPHY AS AN INTRODUCTION TO THE STUDY OF PHILOSOPHY.

THE Study of Physics, or Natural Philosophy, is likewise an Essential Branch of Academical Instruction, in all the Universities of Scotland, and is usually preceded, in the General Course, by Logic and Ethics. In some of these Seminaries, indeed, this Order is Reversed; Natural Philosophy occupying the First Place, and Logic with a Sketch of Moral Science, closing the *Curriculum*. Now, it will be readily granted that, while the Logic and Metaphysics of Aristotle were the only Subjects taught in the First Class of Philosophy, this Change was certainly advantageous. But the Question at present does not respect the propriety of postponing the Study of the Aristotelian Analytics: it is whether Physics constitute the best Introduction to all other Branches of Philosophy, or whether a more

Miscellaneous Course, such as that described in the Preceding Pages, and Selected from Various Fields of Study, ought not to be decidedly preferred.

The Objections which have been here urged against the use of Geometry, as a General Introduction to Philosophical Study, appear to me as being, in some respects, even still Stronger, when applied to Natural Philosophy, properly so called. Indeed the Student must necessarily have made considerable Progress in Geometry before he can enter upon the Study of Physics; the Problems of the Latter requiring an intimate Acquaintance with the Principles and Conclusions of the Former. The Token of Admission to a celebrated School of Natural Philosophy was expressed in these words, *μηδεις ἀγεομητρητος εἰσιτω.* It is indeed only a Puerile and very Superficial Course of Natural Philosophy which can be understood by those who have not made considerable advances in Geometry.

Nor do the Reasons which are commonly assigned for beginning with Natural Philosophy appear to me well founded, either in the Distribution and Connections of Science, or in the Knowledge of the Mental Faculties of the Human Being. It is said, for example, to be an easy and attractive Study, and thus well calculated to draw on Young, Inattentive, Persons, by

Progressive Steps, to Studies of a more severe and profound Description. But it may be observed in Reply that, at the time of life to which the Student in a Philosophy Class is already advanced, this species of Stratagem cannot be practised, either with Advantage or with Success. Children, indeed, who are incapable of feeling the force of other Motives, may be bribed, by some such means, to undertake disagreeable Labour; but Students approaching fast to the maturity of Reason must not be cajoled and blindfolded, in so unworthy a manner. On the contrary, they must be treated like Men; taught to act from Reasonable Motives, from a Conviction of Duty, and from the Prospect of Future Good. In truth, the very Circumstance alleged, that the Subject is Easy and Attractive, constitutes, of itself, at this Period of Study, a Strong Objection to the Admission of it into the First Place of the Academical Course. It is not what is Simple, Easy, and Attractive, which now ought to be selected by the Teacher to Employ the Mind of his Pupil; so far from this, a Judicious Master will see the propriety of placing before him, at this Stage of his Progress, Subjects which demand considerable Thought and Perseverance; no longer concealing from the Youth, that the Acquisition of Knowledge, and of Intellectual Habits, requires a frequent and strenuous Exercise of the Intellectual Powers. Knowledge, indeed, at the Commencement of a Philosophical Course, is not

the Main Object of Exertion; and, accordingly, supposing that the whole Facts which constitute Physical Science could be Communicated at once, as it were by Inspiration, the Grand Aim of every sensible Teacher, the Improvement of the Mental Faculties, and the Ready Use of them in the Search or Illustration of Truth, would completely fail to be realized. I repeat that Vigour of Intellect, an Active Imagination, and a Correct Judgment can be acquired in no other way than by a constant and regular exertion of them; and, therefore, to imagine, that Young Persons may be flattered into the Acquisition of such Habits, without sedulous and continued Labour, is not only to deceive ourselves, but grievously to mislead those whom we ought to Instruct, and whose Exertions we ought to Guide. The Student should be informed that, at a given Point, beyond a certain portion of Difficulty and Labour, on his part, are placed the most Valuable Acquisitions,—Knowledge, Competency, and Respect: and that, in order to Realize these Good things, steady and well directed Exertion is a condition as indispensable as the Cultivation of the Soil is, to the Production of a Crop.

But it is another great Objection to the Introduction of Natural Philosophy, as the Subject of Study, into the First Class of the Philosophical Course; that this Science, like Geome-

try, has no connexion with those of Mind,—with Logic, Ethics, Politics, Jurisprudence, Theology, and the Fine Arts. Now, besides the Direct Effects which would be produced by an undivided Attention to Material Objects, in Abstracting the Mind from the Knowledge of itself, it ought to be remembered, that all the Previous Education of the juvenile Student, has had the same Tendency, although perhaps in a less direct manner, and has confined his Notions almost entirely to things *without*. This Habit, accordingly, is in most cases Powerful and Confirmed, before the Mind is invited, at the commencement of the Philosophical Course, to attend to her own Operations, and to Record the Objects of her Consciousness; and it is, on this very account, more Essentially Requisite that a New Habit should now be Generated, and the Mind invested with the Important Office of turning her Powers inward upon herself. If the Period now referred to shall be allowed to pass without beginning the Study of Pneumatology, the Intellectual Habits will, in all probability, never be duly balanced; Mental Operations will pass Unheeded, and imperfectly Understood; the wonderful Mechanism of Mind will remain unanalized; the Origin of Ideas, and the History of Human Thought, will never be inquired into; and men would then use the noble Gift of Reason, without knowing of what Subordinate Faculties it is Composed, the Laws of its Operations, or the Means of its Improvement.

This being the case, it really becomes a Matter of Serious Importance to introduce, in the Outset of the Philosophical Course, such Exercises as will naturally lead the Student to the knowledge of the Intellectual Instrument, with which all Science is to be attained, the Understanding enlightened and invigorated, and the Sentiments of the Heart elevated and refined. The expediency of such Discipline becomes, perhaps, only the more unquestionable that Natural Philosophy carries with it, in its sublime Views and exhilarating Pursuits, a species of Seducement which withdraws the Mind from examining into its own Operations. The processes of Attention and Reflection, when directed to Mental Objects, are not, in themselves, considered agreeable, until such Habits have been in some degree confirmed. The first Efforts in this way are usually sustained, either by the pressure of Necessity, or by the powerful Motives of Emulation and Ambition. Pneumatology does not present many Attractions to the Youthful Mind; and yet nothing is more indisputable, than that the Intellectual Character, in after life, depends not a little upon the Exertions which are made, at the commencement of the philosophical course, to acquire command over the Mental Functions, to know their reciprocal Influence and Dependencies, and, thus, to secure the Means of Correcting their aberrations, and of adding vigour to their Exercise. Nor is this happy Result, in my opinion, to be obtained in any other way than by

following out a System of Discipline similar to that already sketched out, and which will be farther explained, in the Second Part of these Outlines.

On this Subject, I may venture to say that I speak from some experience. Many Cases have fallen within my observation of young Persons who, on one account or other, began their Academical Course with the Study of Natural Philosophy; but I do not recollect one of those, who, at any subsequent period, directed his Attention to the Philosophy of Mind, or who afterwards became distinguished in any of the Sciences which have their foundation in the Knowledge of its Faculties. A transition from the Study of Mental Objects to those of a Sensible Material Nature, does not seem to be attended with the same difficulty: and, upon the whole, the opinion of Dr. Johnson, expressed in his usual nervous and emphatical Manner, accords so much with that which has been here adopted, that I shall conclude with stating it. "The truth is," says he, in his Life of Milton, "that the Knowledge of "External Nature, and the Sciences which that "Knowledge requires or includes, are not the great "or the frequent business of the Human Mind. "Whether we provide for Action or Conversation, "whether we wish to be Useful or Pleasing, the "first requisite is the religious and moral Know-"ledge of Right and Wrong; the next is an ac-

"quaintance with the History of Mankind, and "with those examples which may be said to em-"body Truth, and prove by events the reason-"ableness of Opinions. Prudence and Justice are "virtues and excellencies of all times and of all "places; we are perpetually Moralists, but we are "Geometricians only by chance. Our intercourse "with intellectual Nature is necessary; our spe-"culations upon Matter are voluntary, and at lei-"sure. Physiological Learning is of such rare "emergence, that one Man may know another "half his life without being able to estimate his "Skill in Hydrostatics or Astronomy; but his "Moral or Prudential Character immediatly ap-"pears."

Such, then, are the views with which the Subjects are selected, which afford Materials for the Lectures delivered in the Logic Class, in this University; and I hope it will appear, upon a fair and candid survey of the whole Plan, that the Attention of the Students, during the Six or Seven Months which compose the Session, is occupied in such a manner as to promote their Intellectual Improvement. The ruling principle of the System is to accommodate the Subject-matter of the Lectures to the Capacity and Actual Progress of the Young Persons to whom they are addressed, to awaken a desire for Information, and to keep alive their interest in the several Discussions and Inquiries which happen to be brought before them.

The Knowledge, too, which is communicated is drawn from the Elements of those Sciences which are to be prosecuted, by the Student in the succeeding Stages of his Academical Career, and is such as will, at the same time, tend to advance the equal and gradual Culture of all the Mental Powers.

ON THE COMPOSITION OF LECTURES FOR A FIRST CLASS OF PHILOSOPHY.

The suitableness of the Materials which form the ground-work of Lectures is, no doubt, a consideration of primary Importance; but it is not the only requisite which must be attended to, in composing Discourses for the Instruction of Students just entering the Threshold of Philosophy. When the sole end in view is the Communication of Knowledge, the natural connection of the Subjects to be explained will, in all probability, dictate to the Teacher the Order which ought to be pursued, and, at the same time, deprive him of any Alternative as to the succession of the different Topics. But in the case under consideration, as the Subjects are chosen with a reference to the Improvement of the Student in the use of his Intellectual Faculties, rather than with the view of putting him in possession of any Class of Facts,

the Method of Instruction will be calculated to meet the natural growth of the Understanding, and to follow the order in which the several Powers of Mind are found to develop themselves.

Whatever, therefore, may have been the Order in which the Teacher acquired his own Knowledge, he must arrange it, when he delivers it to his Students, in such a manner as will best accord with the natural procedure of those Powers of Mind which he wishes to address, and with the generation of those Habits, which he wishes to implant or to invigorate. The Subject, too, must be regarded as New or as very imperfectly understood; and those parts, accordingly, which are the Simplest and the most easily Conceived, ought to be first presented to the Mind of the Pupil, to be followed up by such as are more Complex or Profound. The Tree of Knowledge, like the Natural Tree, has its Root, its Stem, and its Branches; and as the Mind observes these connections in forming a notion of the one, so ought this Analogy to be attended to, in guiding its Conceptions of the other.

Again, it is sufficiently obvious, that Knowledge of an Abstract and General Nature cannot be successfully Communicated without a previous acquaintance with the particular Facts upon which such Knowledge is founded. As the Bodily Eye

comprehends individual objects only, and attains not to the knowledge of complicated substances but by means of a reflex process, originating in the Mind; so the Intellectual Eye follows a similar order in perceiving the various parts of a complex Subject, commencing with separate facts, and ascending by regular steps to the comprehension of the whole. Hence, it is fruitless in the extreme for him who composes Lectures, to be delivered to Young Persons in a First Class of Philosophy, to enter into a detail of theories and systems, and to give Criticisms on their leading principles, while no Means have been used to make them acquainted with the Basis on which they rest. There may, indeed, in such a Class, be a few individuals of riper age, or of superior talents, who will be able to accompany the Lecturer in his profound Speculations; but the greater number would be left behind to grope their way in the dark, "deserted in their "utmost need," by him who ought to have conducted them.

Familiar with the Subject himself, and having ceased to remember the exact order in which he acquired his Knowledge of it, the Teacher is very apt, unless he keep constantly in his eye the Circumstances of those for whom he is Composing his Lectures, to pass over certain Steps in the train of Thought, absolutely essential to the proper understanding of his Argument. To guard against this oversight, imitating the example

of Mathematicians, as far as the different nature of their Subjects will permit, he should proceed through a succession of positions clearly and closely related, and thus maintain an unbroken connection, from the first presentment of the Doctrine to its full and complete Exposition. One great Advantage, too, attending the Subjects which are introduced in the Lectures of a First Philosophy Class, is the facility with which they may be Moulded to suit the Acquirements and Capacity of the Students at large, and to further the General Purposes of their Education. The Professor, therefore, regarding his Pupils as having yet to learn, not only the Branches of Science which he undertakes to teach, but even to think and arrange their Ideas on every other Subject, must have respect to their Ignorance rather than to his own Knowledge, in constructing his Discourses. His Lessons ought to be measured not by what he can give, but by what they can receive; and reflecting that his Pupils come before him to learn what is Useful, and not to admire what is ingenious, he must sacrifice his Elegance, and Talent for Research, and be contented to teach Plain Things in a Plain Way.

In the Circumstances now imagined as they respect the Pupil, nothing can have a happier Effect than to render the Lectures a sort of Appeal to his previous Knowledge and actual Experience.

The principal Subjects of the Course in question, in many views of them at least, admit of a direct Application to the Student's own Mind, and to the Intellectual Processes which are there constantly going forward. In the Explanation of the Mental Powers, for example, with their Offices and Operations, the Student is supplied with an opportunity of comparing the account of them given in the Lectures, with the actual workings of Sensation, Memory, and Judgment, as exhibited by his own Consciousness. In a similar manner, the descriptions of the Powers of Taste, with the various Modes and Degrees of Sensibility connected with the Beautiful, the Grand, and the New, in Nature or in Art, admit of a reference to the daily Experience of the Diligent Student. In general, indeed, whatever the Subjects may be which are explained in the Lecture, they ought to be handled in such a way as to Exercise the Industry, the Reflexion, and the Judgment of the Pupil—these being the Instruments of all his future Acquisitions.

This Method of Procedure naturally leads not only to a form of Lectures well calulated for the Communication of Knowledge, but also to a Peculiarity in the Mode of Composition and Delivery, not less adapted to excite the Interest and conciliate the Affection of the Students. Discourses addressed to very Young Men ought, perhaps, to be formed on the Model of Conversation rather

than on that of a regular Philosophical Demonstration, or of a Rhetorical Harangue. In his Divisions and Subdivisions, too, the Lecturer may proceed a little farther than would be altogether justified by strict Logical Principles, or would be necessary in preparing his Work for the eye of the Public; regulating the number of his Heads and arranging his leading Topics, with the view of aiding the Comprehension of his Pupils, rather than of defining the Exact Limits which separate them from each other. Good Divisions afford great assistance to the Memory of a Student, who hears a Lecture only once, and has no other Means of aiding his Recollection. Such Lectures, moreover, should abound with Illustrations. Wherever there is the smallest Obscurity, or the slightest chance of not being Understood, care should be taken to make use of such Comparisons and Similies as will throw in Light and direct the Reasoning Faculty. Even where there is no particular Obscurity the Mind is relieved by Means of Illustration, from severe exertion and intensity of Thought.

The peculiarity of Address alluded to, and which will naturally suggest itself to the Teacher whose chief object is to be Understood, may be exemplified in a great variety of Ways, and, among others, by throwing the Matter connected with the more important Topics of his Lectures, into the form of Questions. When a Difficulty

is stated, or a Solution is wanted—or, indeed, whensoever the nature of the Discussion leads to or justifies it—the Professor will find some Advantage in putting a leading Question to the Students, stopping a short time to give them leisure to Think, and as if he expected some one of them to return an Answer. In such circumstances, the more Attentive and Ambitious among the Young Men, will consider the question as put to each of them individually, will cast about in their Minds for an Answer, view the Subject in all its Lights and Bearings, and silently settle with themselves what would be their Reply. On some occasions, I have even put it in the power of the Students to stand up in their places and pronounce their Opinions on the Point under Consideration; and many of the Answers given on such emergencies have displayed much Ingenuity and readiness of Judgment. This Experiment, however, requires great Caution and Delicacy. Failure in such a case, arising from a trifling or ridiculous Answer, would not only defeat the immediate object of the Teacher; but it would, in other respects, tend to repress a becoming Emulation, and create such a fear of Contempt as would deter modest youths from less hazardous Enterprises. There can be no doubt, indeed, that the activity and vigilance, which appeals of that kind produce, are highly favourable to Mental Improvement and progress in study; and a Professor who has gained the confidence and

esteem of his Class incurs but a very small risk in occasionally repeating them. The silence and composure of the Students, at such times, are very impressive, and prove that the trial of Skill and Promptitude devised by their Instructor does not fail to awaken a deep interest. Even when no Answers are given, the Practice is not altogether without advantage, for a Comparison is instantly made by the diligent Student of the Explanation delivered from the Chair with the reply which he was prepared to make. If, indeed, a successful appearance is made by one or more of the Young Men, the Effect is both great and permanent, tending powerfully to rouse Emulation and to confirm Industrious Habits. I remember well, and the Anecdote is worthy of being recorded, the striking effect produced on the Minds of his Students, by an instance of great simplicity and candour, on the part of the late venerable Dr. Reid, when he was Professor of Moral Philosophy in this University. During the hour of Examination they were reading to him a portion of Cicero de Finibus; when at one of those mutilated or involved Passages which occur in that Work, the Student who was reading, stopped and was unable to proceed. The Doctor attempted to explain the Difficulty; but the Meaning of the Sentence did not immediately present itself. Instead, however, of slurring it over, as many would have done, "Gentlemen," said he, "I thought "I had the Meaning of this Passage, but it

"has escaped me; I will therefore be obliged to "any one of you who will translate it." A Student, thereupon, instantly stood up in his place, and Translated it to the Doctor's satisfaction. He politely thanked him for it; and farther commended the Young Man for his spirited Attempt. This Incident had a most powerful Effect upon the Minds of the other Students, while all admired the candour of that eminent Professor; nor was there a single difficult Passage which was not afterwards studied with more than usual care, that the next precious opportunity for Distinction might be seized. Powerful, indeed, and lasting, are the Impressions which such incidents make on the Minds of ingenuous Youths. They often contribute more to encourage Industry and sustain Resolution, than formal Precept, or even Affectionate Remonstrance. Opportunities of producing such Impressions, therefore, ought never to be neglected.

In studying to be useful as a public Teacher, the Professor of a First Philosophy Class must extend his System of Accommodation even to the Language and Style of his Lectures. The Phraseology of Science, and the Technical Terms which must be employed in the very Introduction to Philosophical Study, are necessarily in a great measure new to the Students of such a Class. It cannot, accordingly, fail to puzzle the juvenile beginner to have to struggle at once with an Ab-

straction in the Thought, and with an Obscurity in the Language. The Professor, therefore, should adopt, particularly at first, a plain, perspicuous, and even familiar Mode of Expression. Indeed, the form of Lectures here recommended naturally leads to these Qualities of Style, and encourages that Looseness in the Structure, and Colloquial Ease in the manner, which characterize Extemporaneous Instruction. Sentences rigidly measured and precisely rounded are apt to bind up the Meaning: at all events, they answer much better to be read than to be heard.

Teachers of Philosophy, generally speaking, address their Pupils from written Lectures or very copious Notes. A lengthened Experience, however, will perhaps prove my apology for suggesting that a constant and slavish Reading ought to be avoided; and that a Delivery, more or less approaching to Extemporaneous Speaking, should be substituted in its place. There are no doubt many Details, in a Course of Lectures, which may be read with Advantage; but upon the more important and interesting parts of his Subject, the Professor should speak to his Students from clear and just views of the Matter in hand, and from the deep impression thereby made on his own Mind. The constant Reader of written Lectures is, in the eye of Youth, a sort of Mechanical Performer; and, in fact, can scarcely avoid becoming tiresome and monotonous in his Delivery. How

well soever he may read, he cannot give the proper advantage to the Matter of his Lectures, nor acquire that Influence over the Minds of his Pupils, which is placed within his reach. The frame of Mind, too, in which the Lectures may have been composed, the warmth and earnestness which may have been felt in the first train of Thought, are usually found to evaporate in the formal reading of them, when that train is no longer kept up in the Memory, so as to warm the Imagination. The Extempore Method, also, brings the Mind of the Speaker into closer contact with that of the Hearer; accommodates itself more easily to the Wants of the Latter; enables the Teacher to repeat what has not been fully conceived, to change the Mode of Illustration, to relieve the Attention, to excite the Curiosity, and to direct, anticipate, and assist, in a great variety of Ways, which are in vain to be expected from the Reader of a written Lecture.

The practice of Reading has another bad effect, in as much as it precludes, almost entirely, the intercourse of Looks and Feeling which should subsist between the Professor and his Students, during the Delivery of the Lecture; for as matters now stand it would make but little difference, provided he were distinctly heard, if the reader were concealed altogether, and pronounced his Discourses in a contiguous apartment. When, on the other hand, Lectures are delivered *extem-*

poré, as the expression comes warm from the active Thought and animated Feelings of the Teacher, there is produced in the Moment a Species of Sympathetic Influence between him and his Pupils, which it is not easy to describe, but of which the Effects are well understood. He, too, who speaks *extemporé* can look around him with freedom, and form an estimate not only of the Attention which is given by the Students, but also of the Interest with which the Lecture is received. He perceives from the Expression of the Countenance, and the Attitude of the Body, whether the Mind of the Student is caught and carried along by the flow of Argument, or whether he is left behind, and labouring to keep up with the Progress of the Discussion. The Advantages arising from this intercourse between the Mind and the Eye, in a numerous Class, composed principally of very Young Men, are neither few nor unimportant. They have been appreciated less or more by all Teachers, and turned to a Practical Use by such as had sufficient Skill to mark their Tendency. I have heard, from the celebrated Dr. Smith, who was long Professor of Moral Philosophy in this University, that almost every Session there were some of his Students, from whose Countenances and general Behaviour he was enabled to judge whether his Lectures were fully understood. There was an Intelligent and Composed Posture of the Body which he could easily distinguish from that

which denoted a Doubtful or Unsatisfied State of Mind. "One Session" said he, "I observed "an intelligent Student who generally sat in the "same place, with his back to the wall. When "he perfectly understood the Lecture, he sat "with his body bending forwards, in the atti-"tude of animated Attention; but whenever he "found me above his Level, he threw his body "back to the wall, and continued in a careless "posture. That was a Signal to me. I instantly "retreated, took up the subject in another form; "and never ceased my efforts till my *marksman* "bent forward from the wall, and was restored to "his Attentive position. Then we went on har-"moniously together."

It will be admitted, that Teachers may possess great Talents and extensive Knowledge, and yet be deficient in the Habit of extemporaneous delivery. But as there are few qualifications more necessary for the proper discharge of their Duty, this is an Acquirement which Young Professors should spare no pains to secure; and it may be remarked, that those who are greatly Deficient in that useful and popular Talent are, on that very account, disqualified for holding the Office of Public Teaching. Respectability of Character, reputation for other Talents, and for Acquisitions in Science or Literature, and the hope of Improvement in professional Habits, are usually found to recommend Candidates to Situations in

Schools and Colleges; who, as far as the practice of Teaching is considered, possess neither Experience nor the requisite natural Endowments. And when once invested with the appointment, the facility with which the duties of it may be discharged, without attracting either notice or censure, and the total absence of local Competition, too frequently induce the Incumbent to rest satisfied with his original manner, and to regard every change as a useless Innovation.

The possession even of Professional Knowledge, and the art of communicating it successfully to others are two very different things; though the former, as has just been remarked, is often held as an Apology for the want of the Latter, or even as superseding the necessity of such a Qualification. The Professorial Art, however, so to call it, comprehending that of managing a numerous Class of Young Persons, requires an assemblage of Qualities which are not always found united. An ardent and diligent Search for the particular Knowledge required—the Arrangement and Adaptation of it to suit the Purposes of those to whom it is to be communicated—the kind, prudent, and discreet Management of different Characters—the wise administration of Discipline—firmness and self-possession in bestowing Praise and in inflicting Censure—readiness to meet unexpected Demands for Information—the removing of Obstacles, and the solving of Difficulties—

are all, in their turn, required of the Teacher of Philosophy.

I have reserved for the Conclusion of this Sketch the mention of a Duty which ought to enter into every Plan of Education. In the English Universities the Students are required to attend Prayers twice every day, exclusive of Prayers on particular Occasions. The Presbyterian form of Worship, necessarily occasions some difference in the Mode of performing this Religious Service; but in this University the public Lectures are every Morning preceded by a short appropriate Prayer, containing such devout and interesting Sentiments as seem best suited to Compose the Minds of Youth—to prepare them for the Business of the Day, by impressing them with the constant Presence of that Being to whom they are Responsible for all their Advantages and Means of Improvement. The Professor himself must not be in a right frame of Mind, if the presence of so many Young Persons depending upon him for those Instructions on which their future Character and Happiness so intimately depend, does not suggest suitable Materials for the Prayer of every successive Morning.

PART II.

Introduction.

IN the former part of these Outlines, it has been my object to explain the offices and operations of the intellectual powers, including the powers of Taste; to unfold the means by which these endowments of the mind are most likely to be improved; and to communicate, at the same time, such a degree of general knowledge as seems necessary to afford sufficient scope for their suitable exercise. The great end of Philosophical education, however, is not to be obtained by a mere Theoretical acquaintance with the Mental Faculties, as explained and classed by writers in this department of Science; on the contrary, it consists in improved habits of directing their several energies; in thinking correctly, in reasoning closely, in acquired facility of conducting the various processes of generalization, invention, and communication, by speech or writing. A well educated man, accordingly, is not merely distinguished by his knowledge of particular

Theories, as to the arrangement and distribution of the powers of understanding, or the will, but rather by the command which he has acquired of all his faculties, to apply them, as occasion may require, in the prosecution of Science, of Art, or of Business. "It has been unfortunately forgot-"ten," says the profound Dr. Barrow, "that com-"munication of truth is only one half of the Busi-"ness of education, and is not even the most im-"portant half. The most important part is the "habit of employing to some good purpose the "acquisitions of memory, by the exercise of the "understanding about them, and till this be ac-"quired the acquisition will not be found of "much use."

To the same effect is the opinion of Mr. Locke in his Essay on the Conduct of the Human Understanding. "Nobody has made any "thing by the hearing of rules or laying them "up in his memory; practice must settle the ha-"bit of doing without reflecting on the rule; "and you may as well expect to make a good "painter or musician *extempore*, by a lecture or "instruction in the arts of music and painting, "as a coherent thinker or strict reasoner, by a "set of rules shewing him wherein right reason "consists." And in another part of the same Essay. "The faculties of the soul are improved "and made useful to us, just after the same man-"ner as our bodies are. Would you have a man

"write, or paint, or dance well, or perform any "other mechanical operation dexterously and "with ease; let him have ever so much vigour "and activity, suppleness and address, yet no-"body expects this from him, unless he has been "used to it, and has employed time and pains "in fashioning and forming his hand or other "parts to these motions. Just so it is in the "mind. Would you have a man reason well, you "must use him to it betimes, exercise his mind in "it, observing the connexion of ideas and follow-"ing them in train."

The unfortunate practice, pursued in some Seminaries, of attempting to teach Philosophy to youth, by the sole means of public discourses or prelections, and without any regular exertion on the part of the Students, either to acquire intellectual habits, or to understand thoroughly what is pronounced in their hearing, is most certainly a modern innovation, and can lay no claim to the authority of antiquity. We have no exact account, indeed, of ancient systems of education; but, from the doctrines taught in the principal schools of Philosophy, there can be no doubt that regular and vigorous exertion by those who were taught, formed an essential branch of the discipline enforced by the masters. Xenophon informs us, that the Persian system of training youth consisted in a course of stated and emulous exertion; by which they acquired not only

the utmost dexterity in the use of their bodily members, but also strength, promptitude, and decision in the exercise of the mental powers. Even the seven years of silence which Pythagoras is said to have imposed upon his disciples, was meant, it is very probable, to prove subservient to the formation of industrious habits and vigorous exertion. If again, we turn to the doctrines of the Stoical philosophy, we shall perceive that they were very little calculated to favour ease or indulgence, in the course of education. Aristotle, the great lawgiver of science, considered the whole of philosophy viewed in relation to the student, as consisting of habits, moral and intellectual, acquired by means of a regular process of mental discipline. Quintilian, in like manner, the most distinguished instructor of youth among the Romans, from whose Institutions, as has been already remarked, more information may be derived relative to the conduct of education, than from any other ancient author, uniformly made it a part of his plan to prescribe to his pupils a series of Exercises and Themes; of which he has handed down to us several of the principal topics. His declamations may be regarded as examples of the labour and diligence which were required on the part of the young Roman barrister. Nay, what is more, even during the scholastic ages of false learning, of ignorance, and of superstition, when the proper objects of a liberal education were but ill understood, the prelections of the teacher in every pub-

lic Seminary, were accompanied with regular exercises in reasoning and disputation; which mode of training and exhibiting the intellectual energies, was continued until very recent times, in this university.

The facts now stated may be considered as sufficient proofs that the wisest and most learned men, whether in remote antiquity, or in ages bordering upon our own, did not hold mere lectures as competent means of education viewed in its proper light; but that, on the contrary, they regarded these as altogether inadequate to answer the purposes of academical discipline, without the accompaniment of a certain degree of practice, in all the arts to which the attention of the student was directed. It was reserved for the times in which we live to make the singular discovery, that philosophy may be taught to any number of young persons, and intellectual habits may be formed in their minds, by the simple act of pronouncing a lecture from a professorial chair: and agreeably to this view of things, no exertion is demanded on the part of the student; and no exercises are enjoined, whereby he might be led to arrange the knowledge communicated to him; to discover the connexion of its various parts; to compare opinions, principles, theories, and thus at once to make that knowledge completely his own, by improving the faculties of his understanding.

Indeed, it must appear surprising that men of ability and experience, employed in conducting education should imagine that young persons from fifteen to eighteen years of age could possibly acquire habits of industry or intellectual energy, from listening to Lectures, however learned or ingenious. With persons of mature age, who have a deep and immediate interest in the subject of the lectures, the case is materially different. Such individuals will naturally exert attention in the presence of the Professor, and may, besides, be able to form for themselves a course of practical discipline, and to follow out a regular plan of reading and composing, without his assistance or direction. But this cannot reasonably be expected from the greater number of those who attend Lectures in a first class of Philosophy; as it would imply the prudence and steadiness of age where we must look for the giddiness and inconstancy of youth. Every system of academical instruction, therefore, which leaves it optional to the Students, whether or not to second the exertions of the Teacher by private application and stated labour, is founded on a principle radically erroneous and can never be successful.

It is unquestionably true, that able men and good scholars come forth from seminaries, where the plan of instruction is faulty in a high degree; but able men, and even good scholars, are found starting up, in every part of the country, who

have not had the benefit of a regular education at all; and a few instances of success, in the case of young men whose disposition to receive and apply instruction may have been peculiarly favourable, do not by any means prove that the system is well calculated for the great mass of juvenile Students, whose education is to be regulated by it. Nor can it fail to be surprising, that a Teacher of Philosophy should conceive, either that there is nothing more in his power, or that his duty requires of him to do nothing more, than to compose eloquent and ingenious Lectures, to read them to his Students, and to leave the application of them wholly to their own prudence, or love of learning. What farther may be done, and indeed ought to be done, by each of them respectively, will be more fully explained in the sequel.

As the system of practical discipline established in this class has its foundation in the Lectures delivered to the Students, on the elements of the different branches of science already specified, it is essentially requisite, in the first instance, that these Lectures be clearly comprehended, in their principles and details; for, it is very obvious that, amid obscure conceptions of the subjects, or imperfect recollections of the illustrations, the young men cannot derive any advantage from the prelections to which they listen, nor can the Teacher supply himself with the means of calling

into action their mental endowments. When the Professor, then, has done all in his power by a suitable selection of his subjects, by simplicity of arrangement, and perspicuity of style, to render his Lectures acceptable and useful to his pupils, he has every reason to expect that they will be disposed to attend to them with composure and earnestness. This disposition, indeed, with respect to the majority of the Students, ought to be taken for granted; and the next step is to put them in the way of availing themselves of the means of knowledge with which they are furnished, so as to secure as large a share of it as possible.

Various expedients have been suggested for this purpose, among which may be mentioned the art of short-hand writing. With one single ad-advantage, this practice is attended with many objections; for being constantly occupied with the mechanical operation of transferring the words of the Lecture into his note-book, the mind of the Student receives scarcely any ideas connected with the subject under discussion, and is altogether removed from that active and strenuous exertion of its powers, upon which the formation of all valuable intellectual habits are found chiefly to depend. The voluminous short-hand writer very commonly appears less acquainted than others with the facts and reasonings which he has committed to paper; and when he leaves college accordingly, his port-folio, and not his memory,

contains the chief part of the instruction which he carries away.

Some Students, again, unwilling to distract their attention by taking notes during the delivery of the Lecture, keep their minds unremittingly fixed upon the various statements and arguments, as they are successively brought forward; and exercise, as they go along with the Professor, a modified kind of recollection and judgment, on the several parts of his discourse. Upon retiring to their apartments, they immediately review the Lecture in the order in which the subjects were illustrated; and having, in this way, formed a clear conception of its general object, as well as of the subserviency of the different portions of the reasoning to the establishment of the main point, they commit to writing, in their own composition, whatever they may judge to be of leading importance. This, no doubt, is the most profitable way of attending a Lecture; for it improves the mind both at the moment of delivery, and in the subsequent process of reminiscence and abridgement: but as many Students have it not in their power to make such arrangements, with regard to their time, as to render this mode practicable, the greater number adopt a middle course, and take, each in his own way, contracted notes or *memoranda* of the principal heads, divisions, and illustrations, trusting to their memory for the recollection of the remainder. The great diver-

sity of talents and habits which subsists even among young persons, will necessarily suggest different methods of pursuing this object; but that which has just been mentioned, will probably be found most eligible for persons of ordinary memory and capacity.

These hints may, perhaps, appear trifling to such as have not attended to this subject; but all who are experimentally acquainted with the difficulties and embarrassments of Students, when entering upon the study of Philosophy, will admit the importance even of the most minute observations, which may tend to smooth their way, or to throw light upon their path.

ON PUBLIC EXAMINATIONS.

According to the statutes and practice of this University, the Professors of Philosophy, in addition to their morning Lecture, are required to convene their respective Students at an early hour, in the forenoon, for the express purpose of examining them on the subjects discussed in the Lecture, and of prescribing written exercises, on topics more or less connected with these subjects. The increased number of Students, in

this class of late years, has occasioned a corresponding increase in this department of the Professor's duty, and has induced him to devote the greater part of an additional hour every day, with the view of discharging it more fully to his own satisfaction, and agreeably to the spirit of the system according to which the general plan of education is regulated.

The Lectures, accordingly, are always listened to by the Students, under the impression that they are to be subjected to a strict examination on all which is laid before them—on the general division of the matter, the arrangement of the several parts, the connexion and development of the principal arguments, and the analogies, proofs, and facts which are employed to illustrate or confirm them: —and, as these topics are afterwards to be wrought up into small Essays, and produced by every individual Student, clothed in his own composition, such a revisal of them, in the way of examination, seems absolutely necessary to supply materials, and to assist the judgment. In truth, it is not to be expected that a mere single hearing of the Lecture, when formally pronounced from the chair, will prove sufficient to furnish young Students with facts and reasonings, on which to exercise their talents, whether for thinking or writing; and, it is from this conviction, that the practical business of teaching, so to call it, in this University, is made to embrace a regular plan of examina-

tion, as the basis of all the other exercises which are enjoined in the several classes.

In conducting this examination, the questions put to the Students are not of that description which necessarily suggest their answers, nor such as may be answered categorically without being attended with any certain proof that they are well understood. On the contrary, the questions addressed to the young men are expressly calculated to expose carelessness on the one hand, and, on the other, to draw forth the more pleasing evidence that they have been actively employed, and can already exercise the intellectual habits of memory, judgment, and reflection. The experience, and even the abilities of the Teacher, may be easily discovered by his method of conducting an examination. *Prudens interrogatio dimidium est scientiæ.* Among so many young persons of different ages, capacities, and habits, the same questions cannot be put indiscriminately, and with equal advantage to all; for, while there are some who find no difficulty in comprehending the object of an interrogation, and in giving a suitable answer, there are many who, from inattention, defect of memory, or want of intellect, require that the form of the question should be varied, and even that hints should be supplied to aid the recollection. In such cases, the skill of the examiner is put to the test, in accommodating his queries to the capacity of the Student, in giving

courage to the diffident, in removing perplexity, and in suggesting to all the use of their resources.

To give additional exercise to the minds of the more advanced, questions are occasionally put which cannot be answered without entering into an enumeration of particulars, on which general doctrines or first truths are founded, or into a detail of proofs and arguments by which propositions on certain points have been established or overthrown. On one day of the week the examination is made to turn, not on the Lectures which have been delivered immediately before, or even very recently, but on a part of the course long ago concluded, respecting which, the Students can only retain the general statements and reasonings. To assist the mind farther in the processes of abstraction and generalization, questions are occasionally asked which require to be answered by giving a summary of several Lectures, or even by repeating an outline of the divisions and subdivisions of a certain portion of the course. By this means, too, the Students are induced, while they are expected to give distinct answers on the topics handled in separate Lectures, to keep in view the connexion which subsists between one Lecture and another, and among the several parts of the general subject.

The manner of putting questions, likewise demands the attention of the Professor. There are

many Students who, though they possess sufficient information to answer the questions addressed to them, cannot overcome the embarrassment into which they are thrown by their natural timidity; and young persons of this character, it is very clear, may be suddenly checked, by an abrupt or impatient manner, on the part of the Teacher. To discharge this duty well, therefore, the Professor must proceed with kindness and affability; and often satisfy himself with gathering an answer from an imperfect expression, rather than increase the embarrassment of the Student, by recurring to the question. Sometimes, too, he will find reason to blame himself for putting questions which ought to have been preceded by others of a simpler nature: and, on other occasions, he may find it necessary to depart from the order of the Lectures, and to adopt another method of explanation more suited to the talent and progress of the individual. In both these cases, the object of the Teacher will be the same—an endeavour to carry the Student gradually forward through all the intermediate steps of the argument, till he come to the point under consideration, and ultimately to the conclusion in subservience to which the argument was constructed.

The advantages derived from such regular and daily examinations are too obvious to require to be pointed out. The responsibility to which the Students are thereby subjected, and the constant

demands which are made upon their attention have a most powerful effect in exciting activity, and in training the mind to precision, in its various operations. Besides, the practice now mentioned presents many opportunities to the Teacher of illustrating the more difficult parts of his Lectures with greater force and effect, than he possibly could command in a formal discourse. Discovering, also, from the answers received, the particular obstacles which impede the progress of the Student, the point where his comprehension fails, and where mistake succeeds, the Professor is enabled to accommodate his instructions to the particular circumstances of each individual, and to put all in the way of understanding the subject with greater distinctness and accuracy. Animated by the interest which his pupils manifest in this mode of tuition, he will occasionally find his powers of communication and address raised above their ordinary level, so as to make a deeper impression on their youthful minds, and will, in such moments, naturally lead their imaginations from the present scenes of labour and difficulty, to future views of honour, usefulness, and distinction, in which they may hope one day to participate; and thus effect what will seldom be accomplished by a regular Lecture, or a formal admonition. In such circumstances, also, he may frequently seize a favourable opportunity for rousing the indolent, for encouraging the diffident, for directing the spirit of

the adventurous, and for bringing down the ignorant pretensions of the petulant and the assuming. In truth, it is impossible to calculate the happy effects of such unreserved, affectionate communications on the varied minds of ingenuous youth.

It may be farther remarked, that this method of conducting the examination in a first class of Philosophy, is essentially necessary to qualify the Professor himself for the successful discharge of his public duty. If teaching be an art, as I apprehend it is, and an art, too, of the most difficult kind, expertness in it can be acquired in no other way than by practice and observation. How eminent soever the abilities of a Professor, he is not thereby qualified, even to prepare a course of Lectures suited to the various capacities and acquirements of his pupils. Destitute of experience, as a practical instructor, he might, indeed, like Rousseau, frame an imaginary scheme of education, which, however, like the system of that eloquent writer, would prove completely inapplicable to the purposes of ordinary life.

We may condemn or ridicule, as much as we please, the Scholastic mode of Education pursued by our forefathers; but there certainly never was a wilder scheme devised by the perverted ingenuity of man, than that of attempting to improve the minds of youth, and to create intellectual habits, by the sole means of reading a Lecture,

without any farther intercourse between the teacher and pupil. By the ancient method of instruction, a high degree of acuteness and discrimination was produced in the mind of the Student; whereas the mere lecturing Professor does nothing, and can expect nothing, but what may happen to result from the voluntary efforts of the Student himself.

When, indeed, a Professor enters upon his office, he must, at first, follow in some degree the example of others, and form the best notion he can of the course of Lectures, and general plan of Education which he is about to undertake. But Lectures, to be really useful, must be founded upon a practical knowledge of the dispositions and habits of youth; and there is no other means by which this knowledge can be so well acquired as by a constant intercourse with the Students, in the way of examination. He has thus opportunities every day of observing the effects of his instructions, how far they are comprehended by his pupils, and what may be wanting, on their part or his own, to clear doubts and remove difficulties. He becomes, in a little time, nearly as well acquainted with their minds as with their faces, and can ascertain the precise measure of their progress and advancement.

One of the chief difficulties which occur in conducting the examination of a numerous class, is that of preserving the attention of the whole Students during the time it is going on; for as only

a few of them can be examined in the same hour, the remainder, who have no prospect of being called to an account, may be apt to become careless and inattentive. Among the more thoughtless, it is very clear, the attention bestowed during the examination will be in exact proportion to the probability that they themselves shall be examined; and such youths are generally extremely expert in their calculations on this point, whenever they have reason to imagine that the moment of scrutiny returns at stated intervals. An hour, too, spent every day with the mind unfixed and unoccupied will occasion a degree of injury, in relaxing the habits of application, and in confirming those of idleness, which will not be compensated by all the knowledge which a Student, in such circumstances, has any chance of obtaining.

It is here, then, that the experience of the Teacher will manifest itself, in devising expedients to defeat those calculations of the Student. For example, he will not examine the class in any stated order: he will occasionally call upon the same individual at two successive hours, and even twice in one hour; and, as a check to open negligence, he will sometimes fix upon such as appear least attentive, and thereby expose them to their fellow Students. Nor is this all: for to repress more completely every symptom of idleness, and to compel the slothful to labour, he ought, on

certain occasions, before the examination begins, to call out a number of the least industrious and attentive, who are commonly distinguished by unequivocal marks, and require them to prepare, in their places, a written account of the morning Lecture, from memory, or from their note-books; of which they are to read, before the dismission of the class, as much at least as is necessary to make known their activity or negligence. This practice, which is occasionally extended to all the Students, I have found attended with many good effects. It secures the attention of such Students to the morning Lecture; it accustoms them to abstraction, as they are thus made to carry on a different train of thought from that with which the rest of the class are occupied; and, at the same time, it prevents the careless from disturbing the industrious and the well-disposed during the important business of the examination. There are few, indeed, who would not rather endeavour to make a good appearance in the ordinary business of the class, than to have their negligence exposed, and their character marked, by being singled out, in this manner, to give an account of their studies.

ON THEMES.

The Lectures and Examinations, which have been explained, are supposed to afford the Students of a first class of Philosophy such materials as enable them to take another step in their progress to intellectual improvement. The powers of mind exercised in hearing and in comprehending Lectures, are exerted without much difficulty because we have, in some degree, been accustomed to such exercises; but the combination of powers which co-operate to a certain end, the intellectual processes of investigation and reasoning, of composition and of communication, on which the pursuits of science and the active business of life chiefly depend, are at first performed with considerable difficulty. But, in proportion to the frequency and regularity with which these combined operations are performed, a permanent disposition to exert them is acquired, resistance and difficulty are removed, and those powers which at first required firm voluntary determinations, are afterwards performed without any effort, and apparently without volition. Of this we have complete experience in the acquired habits of dancing, and of performing on a musical instrument—and in the great facility with which the exercises of reading, writing, and accounting, are acquired.

The pride of Philosophers has often led them to deviate from the beaten path, merely because common travellers are found to pursue it. Thus, for more than two thousand years, Philosophers overlooked the natural mode of reasoning by induction, because men in every situation of life, and even they themselves in common business, practised it. Did the Teachers of Philosophy deign to receive instruction in the principles of Education from a common Artist, in the simplest occupations of life, they would no longer refuse to combine, with their elementary precepts, a system of progressive exercise, in arranging and expressing thought. The young Artist is no sooner made acquainted with a rule, than he is required to practise it, and to produce specimens for the examination and correction of his Master. While, on the other hand, the Master knows well, that nothing can be expected from his instructions, unless they are immediately followed up by earnest endeavours to embody them in action. These general laws of culture, it is hardly necessary to remark, extend to the more exalted faculties of the mind, as well as to those which regulate bodily habits, while the increase of the original powers of intellect, and the facility of applying them to practical uses, can, it is equally evident, be secured in no other manner. The Teacher of a first class of Philosophy must follow this example. He must, from time

to time, prescribe subjects for Specimens or Themes, which his Students shall be required to execute according to the directions given them; and these Specimens are, also, in a similar manner, to be subjected to his correction and amendment; after which, such farther instructions are to be afforded as may be found necessary. If there be any other way of forming habits of these intellectual processes, it is altogether unknown to me.

The skill, experience, and prudence, of the Teacher are, it is obvious, essentially necessary to success in this part of his business. Indeed, this system of practical instruction is more difficult than the composition of Lectures. The Themes or Specimens required must be as exactly as possible adapted to the actual state of the intellectual powers, and previous attainments, of the Students. The first Themes must be such as will require less labour and exertion than those which are to succeed them. What the Students may afterwards easily effect, must not be attempted at first; but even the first Themes must require such a degree of exertion as will call into action all their powers, and carry them forward to the next step in their progress to higher attainments. That burden which the labourer, by gradually increasing efforts, may become able to support, would completely overpower him, when he made his first efforts. "He that begins," says Mr.

Locke, "with the calf, may carry the ox, but he "that will go at first to take up the ox, may so "disable himself, as not to be able to lift the calf "after that." "When the mind," says the same judicious Author, "has brought itself to atten-"tion and close thinking, it must be able to cope "with difficulties, and master them without any "prejudice to itself, and then it may go on readily." I have most complete experience of the truth of this remark. Many Students have informed me that the tasks which had nearly overset them at the commencement, have been executed with perfect ease before the end of the Session. Some of them have preserved their numerous Themes, and having afterwards perused them in the order in which they were executed, have noticed, with much satisfaction, the accelerated progress of their intellectual habits, and felt the force of Virgil's reflection, "Forsan hæc olim meminisse ju-"vabit."

The celebrated Lord Bacon, from whom every Teacher of Philosophy may find much to learn, seems to have had precisely the same notions relative to Themes and Exercises when prescribed to Students. The Task, says he, must be as exactly as possible accommodated to the capacity and knowledge of the Student, and should require neither more nor less than he can give. Too great a burden might depress those who have little courage, and a burden too easy, might

lead them to place such confidence in their own capacity, as would both repress their ardour, and obstruct the progress of their studies. Mr. Locke has expressed himself with his usual caution and sound discernment on this Subject: "Quid valeant humeri, quid ferre recusent," "must be made "the measure of every man's understanding who "has a desire not only to perform well, but to "keep up the vigour of his faculties, and not to "baulk his understanding by what is too hard for "it. The mind by being engaged in a task be-"yond its strength, like the body strained by lift-"ing a weight too heavy, has often its force "broken, and thereby gets an inaptness, or an "aversion to any vigorous attempt ever after-"wards." In the same Essay he observes, that too easy Tasks are equally hurtful. "He that "has for some time accustomed himself to take up "what easily offers itself at first view, has reason "to fear, he shall never reconcile himself to the "fatigue of turning and tumbling things in his "mind, to discover their more retired and more "valuable secrets."

The Themes which are presented to the Students of a first class of Philosophy, must not only be adapted to their progress and previous attainments, but also be frequently and regularly executed. Nothing can be effectually done in the way of acquiring habits, but what is frequently done. When we wish to succeed in doing any thing,

we exercise ourselves in doing it as often as we can. The same number of acts which, when closely following each other, will generate a habit, would fail to have this effect, if separated by long intervals: and the more difficult the attainment of the habit, the greater is the necessity of frequency in the attempt.

The subjects, also, of the Themes prescribed in a first class of Philosophy must be different and numerous. Were the same subjects to be prescribed every succeeding Session, there would be a great risk of idle and negligent Students borrowing and copying those of a former year, and even attentive Students might occasionally have recourse to such performances to abridge their labour. In this case, Themes, like *Strings of Syllogisms*, as they are called, would become a sort of College property, which, like other property, would descend from one generation to another. This pernicious practice, wherever it prevails, defeats the very purpose of prescribing Themes, and can only be prevented by introducing variety and alterations in the subjects of the Themes prescribed to Students.

The difficulty of finding fit subjects is, probably, one of the causes which has prevented this mode of instruction from becoming a regular part of the business of a first class of Philosophy. We find, accordingly, that the Themes which, in general,

have been required of such Students, have been few in number, and not closely connected with the inquiries pursued in the Lectures. It would appear, that Teachers have not duly considered the nature and object of the chief part of the exercises required, nor the source from which they should be drawn. Young persons entering upon the study of Philosophy cannot be supposed to possess a sufficient stock of knowledge for such an uninterrupted series of composition. The daily Lectures, the Examinations, and the Books which have been recommended to them, must supply materials for the greatest part of their Themes, and the extension of the course of Lectures to the elements of so many different branches of Science, is well adapted for that purpose.

The Themes first prescribed have a reference to the improvement of the intellectual powers which are first occupied in the acquisition of knowledge, and those which succeed, as far as it can be done, are adapted to the natural procedure of these powers, and their dependence on each other. In what immediately follows I shall point out the several classes of these Themes, the separate object of each, and the manner in which the Professor corrects them, after they are executed, with a view to the improvement of future efforts.

OF THE FIRST ORDER OF THEMES.

The object of the first Themes is to accustom the Students to form clear, exact, and adequate notions of the principal topics of the Lectures, and to express these notions in plain and perspicuous language. The hearing of the Lectures, even accompanied by Examinations is, not sufficient to attain that end; for such notions cannot be acquired by any effort of recollection, or in any other manner than by making them subjects of deliberate thought and consideration. Besides, there are many causes which dispose the minds of Students to rest satisfied with a superficial knowledge of the Subject of the Lecture. The unsteadiness and impatience of youth, the difficulty of confining the attention to one topic, the constitutional disposition to pass rapidly from one thought to another, to which it has been long accustomed, prevent young men from fully understanding that which they have no opportunity of hearing a second time. The Students, therefore, must be placed in circumstances which shall, in some measure, compel them to review the Lectures, to awaken their recollection, to make the principal topics the subject of deliberate attention, and then to arrange and express their ideas upon them plainly and distinctly,

in the order in which they have conceived them. Exercises of this kind bring to the test the accuracy and distinctness of their views. The Student may often imagine that his notions are clear, and he may even be able in conversation to express himself in such a manner as to impose upon himself, as well as upon others. But the moment he attempts to embody his thoughts in writing, he will perceive where the light fails him, and where obscurity and confusion begin; and he will find blanks and intervals in that knowledge which he thought he had possessed entire. By such exercises, too, as are usually prescribed at this stage of his progress, and by this more deliberate mode of study, the objects of thought are kept longer within the notice of his mind. Embodied in written signs, the smaller portions or fragments of thought take their place, keep their position, and thus prove the means of distinct and permanent knowledge. Spoken words, which follow each other in quick succession, do not present ideas to the mind so clearly and distinctly as written signs. In some Sciences, particularly those of Arithmetic and Geometry, it would be impossible to carry on trains of thought, even with the greatest verbal accuracy, but it is easily effected by visible characters, and by conventional symbols.

Though there may be some risk of being charged with too much minuteness in specifying the common subjects of Themes, it is necessary,

in order to realize my views as to this work, to give a full and explicit explanation of every part of the plan followed out in this department of our labours. The first Lecture contains an explanation of that knowledge to which the term Philosophy is applied, and also an account of what is understood by the knowledge of the Senses, of History, of Revelation—and the distinction is explained betwixt the knowledge of phenomena, or facts, and that of causes or principles. The Themes are often proposed to the Students in the form of questions, so constructed as to make the exercise a specific answer to them. For example: How may Philosophy be distinguished from other kinds and degrees of knowledge? In what sense is it a knowledge of causes and principles? It is required to give an illustration of the difference between the knowledge of the phenomena and that of its cause, by a rainbow or an eclipse. In what sense is Philosophy an interpretation of the Laws of Nature? &c.

Every succeeding Lecture, in like manner, furnishes many subjects of Themes.—What is the appropriate office of the faculty of perception? In what manner may it be distinguished from sensation? How do we acquire our notions of power? What is meant by a habit of any power? How are habits acquired and how lost? What is understood by the impression of external objects on

the senses? What are the processes of forming abstract and general ideas? &c. &c.

It is unnecessary to give any more examples of the subjects of the first order of Themes. A slight inspection of the printed Synopsis of the Lectures, which is put into the hands of the Students, will show the variety of questions usually prescribed. On all these subjects the Students are required to begin by applying their own powers of attention and discernment to the question, by subjecting the information they have received to their own judgment; and, when the subject regards the operations of their own minds, by attending to what passes there. When it is required, for example, to give an account of the processes of abstract or general ideas, let the Student press the question upon himself—How does the mind form them? and then let him follow closely the steps of their foundation from the first to the last, and, if he performs this part of his business in a proper manner, he will find no difficulty in giving a distinct account of the subject.

This familiar intercourse, which the Student may be supposed to hold with his own mind, is the best and most satisfying preparation for answering the questions proposed to him. On every subject the Students are invited and encouraged to hazard such observations and illustrations

as may have occurred to themselves, in the progress of their studies.

The Students are required to set apart a certain portion of their time every evening for the business of this class, and, particularly, for the composition of their Themes. They are all appointed to bring their Themes with them the following day, or after an interval of a day, according as they may require more or less time. The Professor calls upon as many of the Students as the time will permit, to read their Themes in the presence of the class, or at least such part of them, as may enable him to judge whether they have been executed according to the directions received, and, particularly, whether they bear the marks of labour and diligence, in proportion to the time allotted for preparation. He adds, on this occasion, whatever farther directions may appear necessary to render their labours more successful in future attempts.

OF THE SECOND ORDER OF THEMES.

Though all the Themes require, in general, the exertion of the intellectual powers, each order of

them has a particular reference to some one or other of the intellectual processes, which have been mentioned. The object of the first order of Themes, as has been already remarked, is to promote the habitual exercise of those powers, by which clear, distinct, and adequate notions are formed. The object of the second class is to promote the exercise of those powers by which the notions thereby acquired are arranged under their proper heads.

The diversity of the objects of knowledge is so great, that it is impossible to comprehend or remember them in their individual state. Nature has taught us a method of removing this difficulty by the processes of abstraction and generalization. Children and savages, without instruction, arrange their objects of amusement or of use; and, in the ordinary business of common life, men learn from views of utility or of necessity, to class the objects of their trade or profession with much skill and readiness. In all periods, it has been a favourite object with Philosophers, to dispose under distinct heads, or categories, the various subjects of science or of art. The ancient Philosophers carried this to an extreme length, and exerted their talents more in teaching their scholars to divide and arrange, than in instructing them in the nature and qualities of the objects so arranged.

The processes of abstraction and generalization, by which such arrangements are made, are the instruments of general knowledge. Without them, human knowledge must have been confined to a small number of individual objects, whereas, by their means, the mind can comprehend, compare, and remember multitudes of objects with the same facility as if they were individuals. Though these processes be but little affected by rule, they may be improved by exercise and discipline. The mind may acquire a ready command and application of them. By frequent efforts, it may be trained to seize upon the common features of objects, and to hold steadily in view its abstractions and classifications. This habit may be promoted by a regular course of Exercises, in the execution of which, the Students are directed to fix upon some common quality, by which these objects may be brought under one class. In many cases, as in the animal, vegetable, and mineral kingdoms, particulars, however numerous, may be classed without difficulty; but in other instances, the combining principle or quality may not be so obvious, and it may require observation and discrimination to fix upon a simple, invariable, and common characteristic, by which they may be reduced into order. The powers of knowledge, as has been already observed, may be classed according to the end or result of their operation, in which we make

them the subject of our contemplation. Thus, perception, attention, reflection, reasoning, &c. are sometimes called powers of knowledge, because the result of each individual operation terminates in notions, or the elements of knowledge. From the Lectures, the examination, and their books, the Students may be enabled to answer the following questions. How many classes of words are there in any formed language, and upon what principles are they divided? What is the principle of the arrangement of the predicables and categories of Aristotle, of the division of errors, according to Lord Bacon, and of the different kinds and degrees of evidence? &c.

The end here in view may be successfully attained, by directing the Student to the principal parts of any regular discourse or composition. An oration of Demosthenes, or Cicero, for example, is selected, and the Student is directed to separate it into its several parts of exordium, proposition, narrative, proof, and peroration. Such an exercise, too, it is obvious, serves a double purpose; for while it accustoms the mind of the Student to the principles of division and arrangement, it necessarily induces him to cultivate or renew his acquaintance with classical literature. But it is unnecessary to multiply particulars on this head. Every Teacher conceiving rightly the end and use of such arrangements, will be at no loss in finding subjects to suit his purpose.

The Professor carries this part of the practical business still farther. He presents to his Students a great number of unconnected particulars, and requires them to throw them into their proper arrangement. A chapter of the Proverbs of Solomon is selected, and the Students are required to make an arrangement of the verses according to the connexion of the matter. A similar use is occasionally made of the undigested precepts of Greek morality, of the moral distichs of Cato, and of such like compositions. In the execution of these exercises, the Students are desired to place under one head those propositions which they find difficulty in classing, in case the Professor may be able to point out some principle by which they may brought under their general arrangement.

These exercises are read by the Students in the class, and such remarks are made on the principles of the arrangement, as the particular case may require, that each individual may know how far he has executed his essay according to the directions he has received; and, that the Students may have the benefit of the experience of their Teacher, he usually reads, at the conclusion of this business, an arrangement of the same particulars, drawn up by himself, with which the Students may compare their own essays. I have great pleasure in stating, that on several occa-

sions, I have preferred an ingenious arrangement of some of the Students to my own. There can be no doubt, that a system of exercises executed in this manner must have the certain effect of assisting the natural principle of classification, of enabling the Student to acquire knowledge more easily, to remember more steadily, and to render the results of comparison more exact and more general.

OF THE THIRD ORDER OF THEMES.

The object of this order of Themes is to form, in the minds of the Students, those processes of analysis, and of investigation, which are the great instruments of acquiring science. In the account given of analysis, in the Lectures, it was stated that this process comprehends the combined operations of attention, abstraction, and judgment, directed to the parts or qualities of complex objects, in the order of their connexion and dependence. It is not, however, enough to know the manner in which these processes are performed. The Student must be induced to make a voluntary attempt to execute them himself. Even when he is sedulous in following out the

business of the class, and disposed to exert himself, he still requires the assistance of the Teacher in requiring specimens, in removing obstacles, and in prompting to higher exertions. Before, however, he make any direct attempts to analyze, he is required to give an account in writing of the manner in which a philosophical analysis is conducted in the works of Locke, Hutchison, Hume, Reid, or other Philosophers. Mr. Hume, in particular, has been much praised for his skill in the management of analysis. His inquiry into the principle of moral approbation is considered as a perfect example. When the Student has been accustomed to attend to the progress of analysis, in the works of these celebrated authors, he is next required to put his knowledge in practice. A portion of composition is selected, such as an oration of Demosthenes, or of Cicero, or a Paper of the Spectator, and the Student is required to point out in order, and separately, the principal parts, and the connexion that subsists among them. It is almost unnecessary to mention the subjects of analysis that may be proposed as Themes to the Students. Every Lecture embraces inquiries, of which the separate parts demand attention. Under the first division of these essays, entitled an Analysis of the Powers of Knowledge, an example is required of the analysis of perception. In like manner, the faculties of imagination, of reason, and the external senses, may also be made the subject of Analysis, in re-

spect of their structure and different modifications, the sensations received by them, their varieties, &c. By the frequency of such efforts, directed and stimulated by a vigilant Teacher, facility and dexterity in conducting analytical processes will be gradually acquired; and it is by such results, that the labour expended in this mode of teaching is distinguished, from the mere inanimate routine of Lectures and precepts, unaccompanied with any system of exertion on the part of the Student.

Under this order of Themes is included also those which have as their object the process of Investigation, by which truth is discovered.—This process includes not only the operations of abstraction and judgment, but also of reasoning. To investigate, in the original sense of the word, is to search for an unknown object, by discovering and following out the traces which it has left in the path which leads to its unknown situation. Thus, we find where a person is concealed, by tracing his footsteps from the place from whence he set out. The hound follows the track of the hare or fox, by taking up with his nostrils the effluvia which these animals may have left in their path. To this may be compared the keen and earnest search of the mind, in its endeavours to discover the unknown causes or principles of things. Indeed, the anxieties and puzzlings which the scent-dog manifests in the search of game affords

a visible representation of the careful, anxious, and disappointed state of mind which the Philosopher often discovers in his researches after truth. Knowing that there is a cause or principle to account for effects, or facts, he labours to find it out, he tries all the expedients within his reach, secures one step, and from that proceeds to another, till he comes, as it were, within sight of the unknown cause.

This process has been often explained and recommended to Students, but the Teachers of Philosophy have not done enough, when they have afforded a plentiful communication of knowledge. The Student is still left to pursue the difficult, and, by him, untrodden path of investigation, without any guide to direct him in the course he is to take, or to bring him back to the track from which he may have deviated. It is here, where the master generally leaves him, that the art of teaching properly begins; and it is with the view of supplying this defect, that in this class the Student is required to make efforts, to put his mind in the attitude of awakened research, and to find by a regular process of investigation whatever may be the unknown cause or object.

The Teacher can find no difficulty in selecting proper subjects of trial from the Lectures, from the books which have been read, and from com-

mon observation. The following have been proposed: What were the causes which produced the conspiracy of Cataline? Is the character which Livy has given of Hannibal, supported by the account of his conduct? What were the grounds upon which the Trojans trusted to Sinon, in regard to the wooden horse? What are the difficulties which occur in forming a Standard of Taste? What are the proofs by which Horne Tooke confirms the account he has given of the origin of Prepositions and Conjunctions in the English Language? What are the causes which render it difficult for the Student to acquire a habit of attention?

A farther extension of this order of Themes is attempted, in the composition of which higher efforts are required, and less assistance afforded to the Student; in which deductions founded upon experience and analogy, upon habitual conviction of the undeviating laws of nature, on expectation of similar causes producing similar effects, are successively brought into view. The investigator begins with an effect or fact known, and, departing from it, passes along a chain of proofs, till he discover the general truths or principles from which they proceed. This process is best illustrated by an example. Suppose the remote and unknown object of investigation to be—The state of Egypt, in respect of government, science, and art, in the time of Moses; and the

only fact with which the investigator sets out, that fine Linen existed in Egypt at that time, the investigator begins by directing his attention closely to this fact, and continues it in some such track as the following. Fine linen, that is, fine comparatively to the other fabrics of it at that period, must be formed of fine threads, and those can only be made of fine flax, after it has gone through various arts of preparation, in which a number of workmen are employed. The production of fine flax supposes the culture of other necessary kinds of grain, wheat, barley, &c. for we never find flax the sole object of cultivation. The art of agriculture, therefore, must have arrived at considerable perfection at the time of Moses, and with it the other arts on which it depends.

Reverting again to the first position, fine linen can be woven only in a fine loom, which must be accommodated to the fineness of the threads: and a fine loom cannot be made without much skill in the arts of working metal and wood. Metals are extracted with great labour from ores dug from the bowels of the earth, and must go through many difficult and laborious processes before they become malleable, and be prepared for a loom. The wood also must undergo considerable preparation before it go into the hands of the carpenter; and the loom itself, as a very complex

machine, supposes skill and progress in the mechanical arts in Egypt, at the time of Moses.

The weaving of fine linen, too, presumes an artist who, by imitation and example, has acquired skill and dexterity in the art; and such perfection cannot take place in any country till a division of labour be in some degree established. The skilful weaver must be wholly occupied in making fine linen, and therefore other artists must be employed in providing for him food, clothes, and lodging. Many other arts, therefore, must have existed at that early period.

Before the arts can make great progress in any country, men must have acquired much knowledge of facts by experience and observation, and have begun to speculate on the means of improving them, on removing the obstacles which prevent their progress, and on carrying them to a higher degree of perfection.

Farther; there can be little progress either in art or science, in any country, till there exist a supreme controuling power in some or other of its forms; for till men are allowed to live in peace and tranquillity, and the different orders of society are prevented from encroaching on each other, by every individual being kept in his proper place, neither science nor art can be cultivated to advan-

tage. There are no arts to be found in those nations which live in continual warfare either among themselves or with their neighbours.—Thus, by tracing these regular and progressive deductions, very considerable knowledge is acquired of the state of Egypt, in the period of Moses.

By these and similar examples, the Student may be trained to the process of investigation. He begins with facts or data fully established; these throw light on others which are closely related to them; and thus the mind passes along a connected series of intermediate causes and consequences, till it arrive at distant and remote truths. Many similar subjects may be presented to the Students. For example, what may be learned of the state of Greece, at the time Homer wrote the Iliad, supposing we had no other source of information than his works? Or, what was the state of the Highlands of Scotland, as appearing in the Poems of Ossian? The efforts which the Students make to execute such Themes must have a strong tendency to exercise the powers of attention, discrimination, and investigation; to conduct the mind from phenomena to causes, from principles to general truths, and thus to produce habits of reasoning on other subjects. After this preparation, and supposing at any time the Student is occupied in reading the histories of rude and uncultivated

states of society, from his observation of the state of arts among them, and the facts which are narrated, he will be at no loss to form pretty distinct notions of the internal state of such societies. Finally, the Professor should often present such subjects of investigation to his Students, and never leave them without affording them something to inquire about, or to search for, and if he can once render this process of mind habitual, the Student will require little farther assistance from his Teacher; and the great end of this part of education will be in a great measure accomplished.

OF THE FOURTH ORDER OF THEMES.

Of the Themes hitherto explained, the chief object has been to teach the student to acquire materials or elements of reasoning and communication. About one-half of the session is occupied with such exercises. After that period, they are made to take a wider range. The Students may now be supposed to have added considerably to their knowledge by the daily Lectures, by the course of reading in which they have been engaged, and by some progress in habits of

such preparation, they are now required to execute Themes of a higher order, of which the object is, to communicate their knowledge to others, in compositions, by which certain subjects are explained or illustrated in all their parts, or by which the truth or falsehood of propositions is established by appropriate arguments. The former Themes employed the labours, some of them, of one, and others, perhaps, of two evenings, but for the execution of these exercises, a longer portion of time is allowed, perhaps five, or six, or even eight days, that they may have sufficient time for collecting and arranging their materials. The Students have now more time to account for; but these Themes are composed under the conviction, that they are to be subjected to minute examination by the Professor and their fellow Students, and that one of the first general criticisms will be to determine whether the execution corresponds to the time allowed, and to the industry which might be reasonably expected.

But before I proceed to give directions for the composition of these Themes, which have been suggested to me by experience, I find it advisable to give the Students the advantage of those rules which the logicians have presented for the assistance of young composers. They are certainly useful, if not as rules to be closely observed, attention, investigation, and composition. With

at least as suggestions which may often prevent omissions.

The rules of composition which have chiefly been added to the ancient logic, by the scholastic writers, are such as may be applied to the management of simple and of complex Themes. They are said to be simple, when the subject is such as may be expressed by a term or terms without affirmation or negation, as philosophy, education, emulation, chivalry—the taking of Troy—the battle of Cannæ—the fall of the Roman Empire. Complex Themes are important and probable propositions, which require proof or confirmation. Logic is a useful study—youth is the season of improvement—wisdom is better than riches—evil communication corrupts good manners, &c. The rules are intended to conduct the Student from the first step to the last, to suggest the order in which the materials are to be introduced, and to prevent them from deviating from the path which leads most directly to the end in view. Before the Student sets out on his investigation, they afford, as it were, a general prospect of the country through which he is to pass, of the route he must take, and of what may be required to accomplish it with success.

These rules direct the Student to begin with fixing exactly the meaning of the term or terms by which the subject of the theme is expressed, that every thing doubtful or equivocal may be re-

moved respecting the meaning which the composer has adopted. Difficulties on this point are to be settled by the canons of Etymology and the signification adopted by the best writers. They are next required to explain the subject, by a selection and enumeration of its essential and accidental qualities, according to the order of their import, so as to convey clear notions of the subject of the Theme. When the subject will admit of it, the Student must not be satisfied with a direct explanation of the Theme, but must also give an account of its origin and progress, the perfection or decline of the matter to which it relates, and its connexion with things of a similar nature, with a division of it into its logical or integral parts.

It is not every Theme which requires the application of all these rules. The first rule may be sometimes necessary; the second is indispensable in all subjects; the other rules are only occasionally required. A rigid adherence to these rules might render composition formal, but that, in a great measure, will be remedied by frequent use and judicious application. These rules may be aptly illustrated by taking the ancient logic as the subject of a simple Theme. The object of the first rule is attained by settling the derivation of the term, and the analogy on which it is founded, together with the meaning of the epithet *ancient* applied to it. Next follows an explanation of

the qualities, uses, end of this art, and of the means by which the end is accomplished, viz. by its rules of distinction, definition, classification, syllogism, and method, with the other appendages of the ancient logic, loci, sophisms, &c. each of them requiring a short explanation. This Theme also admits of an abridged narrative of the origin progress, and reception which the ancient Logic met with, at different times, its decline, the substitution of another mode of reasoning, and, lastly, the relation it bears to other branches of Philosophy. Supposing chivalry the subject of a simple Theme, it admits of a similar application of the above rules.

The rules which experience has enabled me to prescribe to juvenile composers, are such as are addressed not only to the understanding, but to the feelings of youth, and should carry with them the authority both of reason and of sentiment; but still they are such as cannot be practised, unless they proceed from the voluntary determination of the individual. The young composer must be firmly convinced, that the application of these technical rules supposes the disposition and resolution to put them in practice. He must carry with him to his study a sincere and earnest desire to execute his Theme in the best manner he can, for he cannot expect to attain what he does not desire, nor to observe these or any other rules, unless he command his attention to them. He may as well

expect to see a visible object without turning his eyes towards it, as to compose a Theme without exerting the power of thinking; and, whatever his genius or talents may be, he must employ time and labour in proportion to the extent of his Theme, and the difficulty of completing it.

When the Student sits down to compose his Theme, I am aware that he requires some other assistance than that afforded by logical rules. Instructions cannot be too plain, or too minute, when directed to young persons just entered upon a new and difficult course of study. The experience which I have had of the anxieties and perplexities which assail the youthful mind, in its first endeavours to arrange and express, in a regular form, the elements of reasoning, has induced me to place myself beside the Student in these moments when his difficulties are most formidable. Let emulation be prescribed as the subject of a simple Theme, which the Student is required to explain and illustrate; and let it be the business of the teacher to watch over his efforts, and his demands, and to give seasonable assistance. Comprehending the end or purpose of the Theme, the demand of the Student is for materials to execute it. Where are these to be found? His first recourse will probably be to authors who have treated of emulation. But he is instructed that there is a much more fertile source near at hand, which will furnish him with materials, pro-

vided he seek after them in the proper way—his own mind—his own experience and recollections. When he puts the question to himself, what is emulation? Let him recollect the scenes on which he has already acted, or on which he has observed others act. He will remember, that when he was engaged with his companions, the common language among them was, " I can do this and " you cannot,—I can do it better than you." When farther advanced, he may remember how he contended to be first in all youthful amusements. He must have read the beautiful description of Gray.

> Who, foremost now, delights to cleave
> With pliant arms the glassy wave;
> The captive linnet which enthrall;
> What idle progeny succeed,
> To chace the rolling circle's speed,
> Or urge the flying ball.

The Student may have still more recent remembrances. He may recollect, that when at school he contended for the first place in his class, or for the first prize in the preparatory classes at College. Upon the clear recollection of these associations, and from congenial feelings which may now actually exist in his mind, let him demand from himself an answer to the question, What is emulation? A desire and endeavour to excel. What is it that excites this desire? An object which other competitors wish to possess. Must

the object of competition have intrinsic value? No, it may be a sprig of laurel, a palm branch, a fox's tail, a medal, a book, a seat of preferment or of honour. What is it then which gives value to the object? It is the circumstance of obtaining it before all other competitors, and in the presence of spectators. It is their reflected praise which animates the competitors, and which makes the breast of the Student palpitate when he receives his prize.

The experience of competitions in which the Student has been engaged, or those which he has observed, will suggest to him that emulation, in its purest form, can only take place where the prize is won by the personal exertions of the individual. When any undue means are used to obtain it, or any obstacle directly or indirectly thrown in the way of a rival competitor, the generous flame of emulation is extinguished, and a mean degrading spirit is substituted in its place. One would think that the mortification which the Student must suffer, when he receives a prize which he is conscious he did not deserve, should dispose him to spurn it as altogether unworthy of his acceptance. He cannot have forgotten the manner in which the friendly stratagem of Nisus, in favour of Euryalus, was received by the other competitors, at the celebration of the Virgilian games.

Again, what are the effects of emulation? When this principle operates with full effect, it is the cause of vigorous conflict, of persevering exertion, contempt of difficulties and danger, increasing hopes, eager expectation, and, in the moments of success, of exquisite delight. But that the Student may have a clearer view of this generous and energetic feeling, he may be directed to the histories of great characters and great events, distinguishing that which belongs to emulation, from the effects of other feelings not unfrequently associated with it. He will be enabled to draw a clear line of distinction, when he considers that the love of fame, and the love of power, are fixed upon the possession of their objects, without any view to competition, or the means by which they may be obtained; whereas the effects of emulation spring from the desire of excelling the other competitors.

The Student must also beware of taking a contracted view of the field of competition. That field may be called up by the imagination. The person in whom the true spark of emulation is kindled, may imagine himself placed upon the same *arena* with the competitors of other countries, and other ages. When Cæsar passed the statue of Alexander, he is said to have burst into tears, because the Macedonian had surpassed him in all his actions at an earlier age. Virgil endeavoured to rival the fame of Homer, and Ci-

cero that of Demosthenes. When the principles of emulation and ambition are conjoined in the same character, and in the same actions, it will require nice discrimination to determine what belongs to each.

The principle of emulation, though inherent in man, is one of those which is unfolded in the social, and not in the solitary state. It is not confined to the breasts of kings and princes, of heroes and men of genius; but is to be found in the cottage, as well as in the palace. In many situations, its influence is peculiarly exerted, and will be found a most valuable auxiliary in public seminaries of education. It is the constant and pleasing resource of the Student, which enables him to support intellectual labour, and to surmount difficulties in the way to academical fame and honour. A shade of this principle seems to descend to the inferior animals. The race-horse is prompted to exertion, by the struggle of other horses engaged in the same career.

This sketch is not intended to serve as a specimen of a simple Theme on emulation, but merely as a general survey of the ground, with the view of pointing out to the Student where materials may be found. There is indeed but little difficulty in conducting him over this field. He has only to embrace the subject of the Theme closely, to apply to his own mind, to press him-

self with interrogatories relative to his demands, to follow out the natural associations of things, and he will soon find materials enough, and arrive at much information which he could not otherwise have conceived to be within his reach. When he has once obtained his materials, he has only to select and arrange them, according to the end he has in view; nor will he find much difficulty in suitably expressing what he distinctly knows.

——— cui lecta potenter erit res,
Nec facundia deseret hunc nec lucidus ordo.

ON COMPLEX THEMES.

It will not be necessary to enlarge on the rules which Logicians have recommended for the management of complex Themes, the general object of which is to confirm the truth of propositions by argument or evidence, and to establish the truth of causes, or the certainty of relations. The most important of the rules required for conducting both kind of Themes are the same, in so far at least as the object of both is the attainment of clear notions, lucid arrangement, and perspicuous expression.—The special rules which relate to

the management of these Themes may be shortly enumerated. That no Propositions but such as are important and probable, can form proper Subjects; that the meaning of the Subjects, and predicates of the Proposition, be accurately fixed and freed from every degree of doubt or ambiguity; that the extent of the affirmation or negation be distinctly ascertained, that the Proposition be stated in the most intelligible manner, and the subject divided according to the logical rules of division:—That the attention of the Student be next directed to the kind of Evidence by which the Proposition is to be established; that the arguments be so arranged as to support each other, and be introduced in such order as that those which precede shall throw light on those that are to follow, and form a connected chain of comparisons by which the agreement or disagreement expressed in the Proposition shall be made manifest. It may often happen that some of the intermediate arguments or proofs may themselves require illustration. These must be brought forward in their proper place. Finally, all objections against the Proposition must be explicitly and candidly answered; and the Proof be concluded with a recapitulation of the united strength of all the arguments which have been brought to confirm it.

It is imposible to prescribe rules which shall exactly accord with the variety of subjects which many come under this order of Themes; and there-

fore much is necessarily left to the judgment and sagacity of the Composer in particular cases. Though he cannot properly apply rules of demonstration, yet the method and certainty of demonstration ought to be his standard as the best and most irresistible method of gaining admission to the assent of the mind. He must imitate the Geometrician in first attempting to establish with clearness the principle or *datum* on which each deduction rests. The Reasoner, however, on general subjects, cannot follow closely the demonstrator, because a demonstration consists of one kind of *Data* only, whereas the proof of a probable Proposition may admit of various kinds of arguments, each of them adding something to the strength of the probability, till their united strength be sufficient to determine the assent of the mind.

That the Student may be aware of the different grounds or principles on which deductions in probable reasoning may rest, he is directed to have recourse to consciousness, common sense, experience, axioms, intuitive propositions, analogy, testimony, facts already proven, and the undeviating laws of nature. To these the Student should apply as the particular case may require; and in order to a right application of them, his attention is first directed to some of the most approved specimens of sound reasoning. One of Cicero's Tusculan questions, or one of his paradoxes, the 6th for example, is selected—*Solum sapientem divitem*

esse, and the Student is required to state in writing the data from which the deductions or conclusions are taken, to specify the different kinds of evidence by which the leading Proposition has been supported, and to characterize the illustrations which are adopted. They may be also required, in such exercises, to appreciate the number, strength, and importance of the respective arguments, and the precise extent of the conclusions which they warrant. A similar analysis is applied to the arguments in the Philippics, by which Demosthenes induced the Athenians to oppose the designs of Philip; those by which Cicero defended Milo, or impeached Verres; or by which Hanno attempted to dissuade the Carthaginians from intrusting the command of the army to Hannibal. It is obvious, that frequent occupations of this kind, suggested from former studies, or from such other specimens of reasoning as may fall within the reach of the Students, must be a good preparation for those of a higher order, when a subject or Proposition is proposed which they are required to confirm or establish.

The following subjects have been prescribed, "Logic is a useful study." "Youth is the season of improvement." "The hand of the diligent maketh rich." "Personal talents and virtues are the noblest acquisitions." Other subjects are prescribed in the form of questions. What are the great obstacles in beginning a course of Philo-

sophy? What are the advantages of classical literature? Is the institution of prizes in Universities useful? Do holidays promote study? Sometimes again the Students are required to execute comparisons, between public and private education, between the diligent and careless Student, between a town and country life, the syllogistic and inductive mode of reasoning, &c. &c. It is presumed, that these occupations constantly and regularly practised, must tend to accustom the mind of youth to investigation, and not only to enable them to find the materials, but to put them together, and to express them in the manner best adapted to the end which they have in view.

It may be said, that the Students of a First Class of Philosophy cannot possess sufficient knowledge or materials to write upon such subjects; and if perfect or finished compositions were expected, there might be good grounds for entertaining that opinion. On the other hand, it is abundantly obvious, that if Students did not begin to compose on any subject till they had obtained a complete knowledge of it, they would never begin at all. The season for forming that important habit would thus be utterly lost. In all cases, perfect specimens must be preceded by many unsuccessful efforts. An eminent writer has candidly acknowledged, that he would be ashamed to disclose the many unsuccessful at-

tempts he had made before he could produce any thing worthy of public attention. Imperfect then as the first exercises of the Students may be, they constitute the natural and indispensable steps which lead to higher degrees of perfection; and to whom can such imperfect attempts be so properly submitted, as to a teacher who can direct how they may be rendered more complete? Besides, these subjects have all of them their easier and more accessible parts, and it is moreover in the power of the Student to add to his knowledge by reading and by reflection. He may be said to begin his work with the small capital he has already acquired, and to trust also to that which, by assiduity and diligence, he may afterwards realize. Nor ought the difficulty of the execution to be altogether remedied. It must be allowed to press upon his mind, not indeed with such force as to break his spirit, but so as to rouse his faculties to powerful and continued exertion. "*Possunt* "*quia posse videntur.*"

ON THE FIFTH ORDER OF THEMES.

THE object of this order of Themes is the improvement of the powers of Genius and of Taste, by a practical course of discipline. Having in a

former part of these essays, endeavoured to give an analysis of that combination of the intellectual powers to which the term Genius is commonly applied, I now proceed to state the course of exercises, which are prescribed with the view of unfolding and invigorating those powers. The following are such as seem best calculated to lead the minds of youth to those important distinctions in the matter and in the manner of composition, which will instruct and guide them, not only in their early efforts, but in their subsequent progress. The more perfect the knowledge of the Student in classical literature, the greater advantage will he receive from the Themes of this order. It is an important step to form clear and just notions of those efforts which are considered as the immediate result of Genius. Such knowledge will not indeed confer the capacity, but where the germ of Genius exists in the mind, it must lead to encourage and unfold it.

Some of the questions which are here put to the Students may be thought too difficult, but let them attempt to answer them, even if they should partly fail. What are those parts in the Iliad which best discover the invention of Homer; and what are those passages which betray the least of it? What are various shades of courage, with their combinations, in the Heroes of the Iliad? What are those *traits* in the poetry of Virgil, by which it is distinguished from Homer? Similar ques-

tions may be put respecting modern as well as ancient Poets.

Subjects still more general may be prescribed. What is the distinction between poetry and prose? What are the limits to which poetic fiction should be subjected. At other times, the Students are required to imitate a dialogue in the manner of Socrates—a fable in that of Æsop—an eastern story similar to those in the Arabian Nights Entertainments. On reading the biographical accounts of men of eminent talents, they are desired to state the circumstances and incidents which gave an early direction to their genius; and the manner in which obstacles were removed. I mention so many and various subjects, that the Teacher may perceive the resources which are within his range.

It is again admitted that Genius does not originate in the technicalities of education, or in the observance of abstract rules for training the powers of intellect. But it naturally occurs to ask, Has the teacher no other way of working but by the mechanism of rules? Has he no opportunities of communicating vivifying impressions, and of rousing activities which cannot be touched by artificial precepts? He is the instructor of young men who are just come from classic ground, and, it may be supposed, have had their minds in some degree awakened to those beauties

which they have met with in these favoured regions. The first dawn of manly study is new and pleasing; and young men are delighted with the consciousness of their mental activities. The presence of a numerous band of youth, in similar circumstances; nearly of the same age, engaged in the same pur suits, and contending for the same distinctions, affords favourable opportunities of exciting those sparks of emulation and ambition which have such powerful influence on the intellectual energies. Sanguine in their hopes, willing to labour, and pleased with instruction, they set out with the most agreeable anticipation and are elated with the hopes of success.

With the same view of unfolding and extending the power of Genius, exercises are occasionally presented, towards the end of the Session, which afford still more ample scope for their ingenuity and industry. In the former Class of Themes, the Students have been accustomed to the strict observation of rules, but they should be sometimes left to make rules for themselves, in the management of their Themes. In the fine arts, unless the work of the imitator excel the copy, the arts are at a stand, and no farther progress can be expected. Rules prevent deviations and irregularities, but they cannot create inventions, or lead to any high degree of excellence. The noblest works of genius have not been the re-

sult of rules, but, on the contrary, they have often sprung from ignorance, and even from a positive violation of rules. Many men of genius have had none of the advantages of regular education. Young persons, therefore, in the course of their education, should be left on some occasions to the native impulse of genius and of taste; to make bold attempts; to disdain the little limits of their reign; and "unknown regions to descry." The great diversity of talents and of taste, in so many young persons, should be allowed to disclose itself, and not always be forced into the same direction, or be stretched upon the same Procrustes' bed.

In this class, therefore, of voluntary Themes, the choice of the subject, and the manner of treating it, are left to the direction of the Student, with those restrictions only, that the subject shall be important, and that it shall bear the accustomed relations to the Themes, usually prescribed in this class. If any Student make an improper or unseemly choice, his labour is lost, and the Theme is returned with the *stigma* it deserves.

Experience has suggested a necessary precaution in the entry upon this sort of exercise. Young persons, in such circumstances, are apt to be undecided in their choice of a subject, and to spend much time in chusing, and in rejecting. They are, therefore, required in two

days, to intimate the choice they have made. They are desired to chuse a subject according to the well known precept of Horace:—" Sumite materiam," &c. from among the number of those with which they think themselves best acquainted; one, on which they are disposed to think, or to reflect; and one, if possible, of which they may have already made some trial. They are allowed also to chuse the form and method of their exercise. It may be a narrative, or a description, an argument conducted in the form of a dialogue or essay, or of declamation or debate; an epistle or a fable; a specimen of imitation or of investigation. It may be either composed in prose or in verse, epic, dramatic, or pastoral. The Students are particularly desired to bring forward their performance in their own manner, that an opportunity may be afforded of giving them instruction, as the particular case may require. They are required to subjoin a signed declaration to their Theme, that it is their own composition, and not selected or copied from any Author.

This exercise is very important, and ought not to pass without a particular review. The Students have been invited to try their strength, to discover the natural bent of their minds, and and those peculiar talents on which their future prospects and success in life depend. They are entitled to the deliberate judgment of their in-

structor. A rash or inconsiderate judgment might flatter delusive hopes, or check the rising efforts of talents. The Teacher may have it in his power to impart such counsels as may save much fruitless labour, and prove the means of much future success.

The Teacher has, indeed, a difficult task to perform in passing his judgment on such essays. He may, perhaps, find it necessary to communicate instructions which are not to be found among the canons of criticism, and to oppose partial judgments in their own favour. He may have to recommend a different direction of talent from that which may be discovered in the specimen, and to tell the Students plainly where their strength or their weakness lies, where the current is likely to carry them, and where it is to set. When he has to judge of poetical essays, he may have to intimate, whether he thinks the promises in that direction are sufficiently strong, or in what department of poetry they are most likely to succeed; and not unfrequently to advise those who conceive, that to clothe their thoughts in metrical enunciation is to write poetry, to confine themselves to the more humble path of prosaic composition.

To the exercises which lead to the improvement of the powers of genius, I have added those which respect the improvement of the memory.

This faculty has a close connexion with all the other powers of mind, and in a certain sense may be said to be the basis of them all. A good memory, is in some measure, essential to genius. Plato and Aristotle call the memory, the health of the senses, and of intelligence; and one of them expressly says, that those who excel in genius remember most easily. Quintilian considers it as a mark of early genius. "Ingenii signum in puero præcipuum memoria est." "Ejus duplex virtus facile percipere et fideliter continere." It carries with it almost the force of an axiom, that a ready, distinct, and tenacious memory, must greatly facilitate the exercise of the higher powers of the mind.

It is, however, scarcely necessary here to mention the Themes or exercises which respect the improvement of memory; for the whole business of the class, in one way or other, tends to the improvement of this faculty. Every thing that contributes to improve the power of attention, has a direct influence on the power of remembrance. The Students are every day responsible for an account of the Lecture, and soon after they hear it, must give a written sketch of it. The examinations, in the manner in which they are conducted, afford a constant and regular exercise to the faculty of memory. The only direct exercises, therefore, which I have been in the habit of proposing for the improvement of the memory, are the following, which are optional. The Students

who attend the College Chapel on Sunday, are desired to give a specimen of recollection, without notes or assistance of any kind, of the sermon, which specimen is read in the class on the following day. Upon one occasion, near the end of the Session, a prize is proposed to the Students for the best specimen of recollection of a particular sermon, which, by a note subjoined, they must declare was the sole effort of their own memory without taking notes. To secure to the candidates an impartial determination, the specimens are put into the hands of the preacher, and he is desired to put his mark, not on the best composed specimen, but on the one which contains most of the substance of his sermon. The general effect of such exercises, in addition to the religious and moral knowledge which they are calculated to impart, is the improvement of the faculty of recollection, and the habit of carrying from discourse or conversation whatever may seem of importance.

An attempt was made some years ago in this, and I believe also in most of the other Universities, by a person calling himself a German Professor, to introduce what he considered as a great improvement on the ancient doctrine of artificial memory; and, I have no doubt, that by his clumsy local compartments and arrangements, and a very industrious method of preparing his pupils, which he kept out of view as much as possible, he might enable them to remember by asso-

ciation a few things readily. But his method was not calculated to afford any general aid to the faculty of memory. In truth, the extension of his association would of itself soon become a cumbrous load to the memory of most persons; and the more it is practised, the more inimical it seems to the general culture of this faculty. Some of those who zealously espoused this doctrine, imagined that they had engrafted prodigious memories in their children, but had the mortification to find, that no general effect had been produced; and that the whole system was nothing more than a piece of metaphysical quackery, which was at first sight a little imposing in its ostensible effects, but was not productive of any permanent improvement on the faculty of memory.

ON THE METHOD OF DETERMINING THE MERITS OF THE THEMES.

The labours and the anxieties of the Student are by no means at an end when he has executed the prescribed Theme, nor those of the Professor when he has delivered his Lecture, and finished his examination. It cannot be expected, that the difficult art of composition can be acquired by the Students from listening to Lectures, and making a few unconnected efforts to express their thoughts on paper.

The execution of a series of such specimens, is the foundation on which the only effective system of discipline can be constructed; without which, neither the Professor nor his Students, can be properly said to have discharged their respective duties. What, let me ask once more without offence, is the line of conduct which the master-artist pursues, when his apprentice has shewn him his first specimen of workmanship? He examines it carefully, he minutely compares it with the instructions he gave, and points out to his apprentice where he has done right, where he has failed, and where also he has succeeded beyond expectation. He accompanies his remarks with still farther instructions, to be observed in the next succeeding attempt. When the next specimen is produced, he makes a still more scrupulous examination, he extends his instructions to smaller imperfections, and directs his attention to nicer beauties. The Teacher of Philosophy, if he wishes to do any good, must follow this example; and I take the liberty to add, that such a person neither understands his art nor his duty, if he does not cheerfully bestow the additional time and labour, which the circumstances of his Students certainly require.

The specimens executed by the Students are not all of that order which require to be submitted to the deliberate examination of the Professor. On the specimens of the first class of Themes,

he requires only that the Student should read them, when called upon, in the presence of the class; and he takes an opportunity of making such remarks as occur. Those which are to undergo a more complete examination, are usually entered upon about the middle of the Session, and are composed with that view. A greater degree of attention is bestowed upon them, and longer time is given for their execution. The Themes must be written out in a clear distinct hand, without interlineations or corrections. They must likewise be delivered at the appointed time, that another exercise may be prescribed while the former is under examination. The Professor carries the exercises home with him for private examination, and brings a certain number of them every day to the class, with the corrections which which he has made, and reads such parts of the Themes and criticisms as he finds necessary. In this manner, during the two or three months of the Session, the business is carried on; one Theme being under inspection, and in the course of being read in the Class, and returned to the Students, while they are preparing another to be subjected to the same trial, to undergo the same process of remark in private, and reading in public. The advantages of this method of instruction can scarcely be appreciated except by those who have seen them realized in their actual experience. For example, it is impossible for the Professor to anticipate by instructions what can

only be suggested by the specimens in his hand. The Student, we may suppose, has exerted all his skill, and no small share of labour, in the composition of the Theme, and it now remains with the Teacher to appreciate his success. He thereby knows, too, what farther instruction may be required, and the Student is in a favourable situation to profit by any thing that may be said. Without such or similar intercourse, in short, the production of first specimens of composition cannot contribute much to the improvement of the Student.

It is scarcely necessary to remark, that the nature of the judgments which the Professor passes on the compositions of his Students, must vary according to the merits or demerits of the execution, the form of the composition, and the progress which the Student has already discovered. There are two general views, however, which the Professor endeavours to keep before him in the examination of these Themes. First, to trace the course or tenor of the Student's mind, from the beginning to the end, in the introduction, selection, and connexion of his materials that he may be enabled to point out, when he has gone astray, when he has kept on the right path, and whether he has chosen the best course to attain his end. Secondly, To observe whether the quality of the style be such as seems best accommodated to the nature

and kind of the materials, and to the end in view. When the Professor returns these exercises, he delivers his judgment publicly in the class, and reads those parts of the Theme, when he cannot overtake the whole, to which his remarks have a particular reference, at the same time, informing the author for his benefit, and that of the class, whether upon the whole the subject has been properly treated, in what points it is defective, whether digressive matter has been introduced, the rules of method properly attended to, and the language adapted to the subject; nor must he forget to point out these parts of the Theme in which the Student has been most successful, that by his public approbation he may confirm the industry and ambition of the author, and excite the emulation of his fellow-Students.

Though the time and labour requisite to examine the Themes of a class, which of late years has amounted to nearly two hundred Students, be considerable, experience and habit enable the Teacher to execute this work more expeditiously than would be at first sight believed. A few hours in the evening during the latter period of the session, are sufficient for the examination of as many Themes as he can publicly discuss the following day. A slight perusal of many of them is all that is necessary to perceive their general defects or merits, and the facility which

every teacher may acquire in this sort of criticism, has enabled him to make his remarks useful, even when the Theme is not publicly read. Referring to certain technical marks previously explained to the class, indicative of digression, redundance, repetition, obscurity—defective or ill arranged sentences,—faulty epithets, which he fixes on the margin, the Student is directed to those parts of his Theme which require farther attention, and to the general nature of the defects which have been noticed. And if the Student has any doubt regarding the import of these technical marks, he has every day an opportunity of becoming acquainted with the principles of Criticism, which regulate the opinion of the Professor.

It must be acknowledged that the correction of Themes in this manner, and, particularly, the exposure of defects, so as not to give offence, is a matter of considerable delicacy, and requires some prudence. Young persons may be readily excused for thinking too highly of their own performances, while they are apt to be disappointed and discouraged upon discovering imperfections where they were not expected. In such circumstances, the Professor must touch their failings with a tender hand, and in the spirit of parental kindness and forbearance. The earliest buds of Spring are easily affected by the inclemency of the atmosphere, and harsh remarks, or even the

delivery of them in a forbidding and authoritative manner might prevent altogether the farther effects of such useful and improving exercises. The instructions and admonitions, therefore, of the Teacher, should fall upon the tender minds of youth, like gentle rain on the new sown-fields; and communicate both nourishment and vigour. When the Professor, in this way, lays open to youth the sources of mistake and of error, and smooths the access to the Sciences, their candid and ingenuous minds readily yield to salutary instruction. It is on such occasions, when their minds are rendered attentive and docile, that he has it in his power to reach the latent springs of action, to give young minds a favourable direction, and to do more good than could be done by ingenious Lectures, or by severe remonstrance.

The most difficult, at least the most delicate, part of the Professor's business, is the treatment of the more faulty exercises. Were he to expose them in the unqualified terms of disapprobation which they may possibly deserve, he might ruin every chance of being useful to their Authors. He must be satisfied with overlooking at first some of these faults, and neglecting no opportunity of encouraging the Student to do better. The approbation which he bestows on meritorious exercises is to many a sufficient reproof, and were the Professor to add a full exposure of defects, alienation and aversion from study would probably be the immediate con-

sequence. The Teacher, therefore, as far as he is warranted by prudence and ulterior views, must mingle some approbation even with his severest censure, and lay hold of every thing that can afford encouragement. On no account must he lose that influence which he possesses over the minds of his Students, in the use of which stands his only chance of bringing them within the reach of improvement. This regular method of appreciating the merit of Themes, in a class of Philosophy, has not been much followed; but it will appear still more novel to commit the determination of the merits of Themes to the Students themselves. Yet according to the plan of conducting the business of the first class established here, this plan is absolutely necessary. With all the time and attention the Teacher can bestow on so numerous a class, and with all the expedition he can acquire by constant practice, he cannot possibly overtake the examination of all the Themes; and yet unless the Themes are regularly examined and brought into public notice, the attention of those Students whose exercises are overlooked, will soon become relaxed, their spirits depressed, and their feelings irritated. If our Themes pass without notice, they will naturally ask, why need we give ourselves so much trouble in composing them? The whole Themes therefore must be examined, or the plan must be given up.

This situation has suggested a method of review, of which much use is made in the Logic Class, which not only removes that objection, but brings with it incalculable advantages which cannot be obtained in any other way. When the Themes are ready for examination, the Professor makes choice of ten or twelve Students most distinguished by their abilities and progress, and to them are committed the review of such Themes as he cannot himself overtake. These are, in the language of the class, called Examinators, a less assuming title than that of critics or censors: To each of them a certain number of Themes is committed, for which of course they are accountable, and which they are required to read over carefully, to examine in every part, that they may be able to appreciate their merits, and to give in a report in the form of a written criticism attached to the Theme, and signed by the Examinator. When the Theme and the criticism come to be reviewed by the Professor in the class, unless he finds something particular or exceptionable in it, he reads publicly the parts of the Exercise on which criticisms are made by distinct references, makes upon them such observations as he finds necessary, and returns the Theme with the criticism to the Author. If the criticism does not give satisfaction, a method is pointed out to be afterward explained, by which both the Theme and the criticism are brought again under the inspection of the Professor.

This mode of appreciating the merit of Themes, in a Philosophy class, may appear unsatisfactory, or objectionable, but experience has sufficiently shown, that many advantages are derived from it. It has always happened, I believe, in most public schools, that the more advanced Students, in some way or other, have given assistance to inferior scholars. This method was practised here long before the names of Lancaster or Bell were known to the public. The management of such assistance is no doubt somewhat delicate, and the advantages connected with it depend not a little upon the experience and prudence of the Teacher. Were not the Examinators subjected to strict discipline and controul, the practice so far from being useful, might be extremely pernicious. Ignorance, conceit, partiality, and petulance, on the part of those juvenile assistants, might give occasion to disappointment, chagrin, and irritation, in the minds of such as might conceive that their Exercises had been unjustly criticised. But with the precautions that are taken, these disagreeable effects are altogether prevented. The Examinators are publicly and solemnly appointed to their office, which is considered as highly honourable; and before they enter upon it, they are bound to discharge it according to the instructions which they receive, and from which they are made to understand that there must be no deviation whatever.

The Examinators are first of all expressly prohibited, from allowing the Themes committed to them, to pass into the hands of others, and also from taking any assistance in forming or in expressing their judgment. Did they not strictly observe this rule, occasion might be given to the circulation of remarks, and conversations among the Students offensive to the authors, while, at the same time, the Examinators would be prevented from exercising their own judgment, by mendicating the opinions of others.

Again, the Examinators are required to read over the whole Theme committed to them, for the express purpose of fully comprehending its general outline. They are next to give an account of the method in which the Theme is conducted, and the particulars which follow in their order, from the beginning to the end. Then they are to apply the rules of criticism which belong to that kind of Theme, and to determine how far it has been executed according to the instructions given, and the end proposed, whether digressive matter has been introduced, or any thing of importance omitted. When they have exhausted their critical powers upon the matter or substance of the Theme, they are next desired to extend their remarks to the arrangement of the sentences, the choice of the epithets, the propriety and the use of figurative language. Finally, they are instructed not only to report faults and defects, but

also to point those parts of the Theme which best deserve to be read publicly in the class, that the Author may be gratified with his success, and also that it may prove an encouragement to others.

The Examinators are farther required to deliver to the Professor the Themes, with the Criticisms annexed, at the time appointed, containing distinct and obvious references to those parts of the Theme which have given occasion to their remarks; and also to make use of the Technical marks already alluded to. In the discharge of this duty, there is one rule absolutely indispensable, and which is never allowed to be violated with impunity, viz. the Criticisms, however just or well founded, must be expressed in liberal and becoming terms, with that diffidence, and candour, which are due from those who must be conscious of many defects and imperfections of their own. It is farther understood, as an obligation binding upon the whole class, that no mention whatever be made out of doors of any strictures or remarks which may have been made on the Themes by the Professor, or by the Students, with certification, that, in case of such an offence being discovered, the individual convicted can take no part for the future in the public business of the class, or receive any prize or mark of distinction, to which he might otherwise have had a just claim. Great politicians will,

no doubt, smile at this humble Code of academical jurisprudence; but it would be well for the public that laws of higher authority were as regularly observed, and as seldom violated.

The advantages derived from this mode of criticism suggested the idea of extending them to all the Students in the class, and of affording to every one, in his turn, an opportunity of exercising his powers of criticism. This object is easily attained by interchange of Themes prepared for examination, by committing to each Student the Exercise of one of his class-fellows for the purpose of criticism. The experience which the Teacher has acquired of the abilities and progress of his Students, enables him to distribute the Themes in such a manner as to render the competition fair and equal. He makes the strong enter the lists with the strong, and those of moderate or inferior abilities to engage with such as are nearly on a footing with them. There are certain exercises, which are evidently of a superior cast, which the Professor reserves for his own inspection, and also such as he perceives abound with defects, and he returns the latter with such remarks as are most likely to encourage, and to direct future efforts. The more distinguished essays, he often descants upon at great length; and draws from them lessons suited to rouse the emulation and industry of youth. In this way the spirit of emulation is not checked by great superiority of talents

being thrown all on one side, and nothing is required from any individual which he is not known to be able to perform. Thus, opposed to each other, with as much equality as can be expected, every single Student is furnished with the strongest motives to exert his attention, and his ingenuity. It becomes a sort of Single Combat, in the presence of many spectators, and it has been found to produce attention and diligence in many Students, when other motives had failed.

To give full effect to this method of discipline, one step farther has been found necessary. Among so many spirited industrious young men, it may be expected that the Author of the Theme is not always satisfied with the judgment of his Examinator; and he may, perhaps, be suspicious of ignorance, or misrepresentation, in the criticism. The more the Author is conscious of ability and industry exerted in the composition of the Theme, the more apt will he be to question the judgment which has been formed of it. To remove, therefore, every ground of misunderstanding, in a manner acceptable to both parties, and to give encouragement to farther exertions of ingenuity or industry, the work of criticism is continued. The Author of the Theme is allowed to peruse the criticism, and to return it to the Professor, with such explanatory remarks as he may think necessary; and, on certain more important points, this warfare is carried one step far-

ther still. But the Professor takes the first opportunity of putting an end to the controversy, by interposing his own judgment on the subjects in dispute, to which both parties readily and cheerfully submit. During this amusing conflict, new lights and prospects are discovered, which often conduct the parties beyond their expectations. It is perfectly understood, however, that none but points of importance can be admitted to a second review.

The utility and efficacy of the rules by which these Themes are conducted, have been demonstrated by long experience. Not half a dozen of cases have occurred, for more than forty years, in which it became necessary to inflict censure for improper discharge of this duty. Mistaken as the Examinators must often be, in the remarks which they make, they always express their opinion, such as it is, in modest and inoffensive terms. When any important difference has occurred between the Author and the Examinator, the Professor has ever found it easy to settle it to their mutual satisfaction. Young persons will always prove docile and reasonable, when they feel that they are treated with candour and with kindness. Esteem and confidence open the minds of ingenuous youth, and keep alive a sense of obligation and of duty.

Finally, the method of conducting the Themes

and criticisms of the first Philosophy class, is highly beneficial, both to the Authors and Examinators; and has been found, from experience, an excellent expedient for calling forth the intellectual energies of the Student. There are few situations in which young men can be placed more favourable to application and industry. Their interest, honour, and spirit, combine with the exhortations of the Teacher, in disposing them to an animated discharge of their duty. The Authors of the Themes compose them under the impression of their being subjected to a strict review; the Examinators employ their utmost efforts to discover imperfections and defects; and the Teacher himself must acknowledge, that, by thus watching over, and directing, this intercourse between his Students, he has derived much experimental instruction in the proper manner of conducting the business of the class.

CONCLUSION.—ON THEMES.

Such an account has now been given of the nature and object of the Themes prescribed and executed in the Logic Class, and also of the me-

thod of determining their merits, as, it is hoped, may enable any Teacher, who approves of this plan, to put it in practice as far as circumstances will permit. It is not to be understood, that all the subjects of Themes which have been mentioned are discussed in one or even in several Sessions. The number and variety of them are intended merely as specimens, to show that the sources from which the labour and exertion of the Students may be drawn are almost inexhaustible. Nor is it strictly necessary that the Themes should always be prescribed in the same order in which they have been explained in this essay. The Teacher ought to regulate his conduct in this respect according to circumstances, and to prescribe more or fewer of one kind than another, as he may see fit.

Before I come to the conclusion of this essay, I am tempted to propose another order of Themes, different from any of the former. I do it, however, with great diffidence, because I apprehend it is the first experiment of that kind which has been made in any class of Philosophy.

It has been sufficiently explained that the object of all the Themes, which have been prescribed, is the acquisition to the Student of clear and distinct notions, accompanied with proper arrangement, and habits of judging, reasoning, and communication. The attainment of these

habits is more or less connected with premeditation and study. But, if we take a survey of the powers and habits which are required to carry on the business of life, we shall find that there are other active processes and habits than those already noticed, the possession of which is of infinite consequence, and which, as has been already remarked, are not called forth by the ordinary routine of public education. The science of Pneumatology is not yet so far advanced as to enable us even to give appropriate names to the powers of mind here alluded to. The great talents, by which the important business of life is carried on, cannot be acquired by a system of preparatory studies, but only by such exercises as tend to promote decision and despatch, to remove doubt and hesitation, and to lead the mind to seize the fittest occasions, and the happiest moments, for decisive and vigorous exertion. In the management of great and complicated negotiations, for example, where there are various interfering interests, requiring mutual adjustments and accommodations, with little time to devise expedients, the man of solid and methodical talents, who can only think according to a slow and regular process, is completely outstripped by the use of those superior powers by which men conceive, judge, and determine, as if by intuition. Many persons can make a set speech for a public assembly, at once argumentative and eloquent, if you give them time for preparation, but are altogether

thrown out, if any thing unexpected occur to derange the train of their thoughts, and the concatenation of their reasoning; but how different is this slow methodical process, from the facility and dexterity with which the accomplished orator draws his materials, in the instant, from the most remote sources of his knowledge; or from the readiness and success with which the man of science supplies himself with appropriate arguments, and lucid illustrations, to support and to adorn his theory.

Any system of education, therefore, which promotes the developement of those intellectual energies; which cultivates presence of mind, a ready command of the intellectual faculties, fertility in expedient, spirit in the attempt, and celerity in the execution, must prove of incalculable benefit. These important processes of mind are but little promoted by the common discipline and ordinary routine of our systems of public education; and many have doubted even how far these high intellectual energies are under the controul of education at all, and whether they are not altogether inherent and constitutional.

But, without pretending to deny the great and the striking difference in the original constitution of the human mind, I think it cannot reasonably be doubted, that these high intellectual

endowments to a certain extent, at least fall within the range of intellectual improvement. In proof of this, it may be remarked, that no person ever possessed them, in their highest degree, at the first attempt; while, on the other hand, we may observe them enlarged and confirmed by favourable situations and circumstances. When the experienced general served his first campaign, he did not possess that nice *tact* of fixing on a favourable field of action which he afterwards acquired. Many are the quick and dextrous processes of the mental powers which are acquired, even in the earliest period of life. The boy at first finds great difficulty in binding ideas to signs, in combining letters and sounds, which he afterwards does with a rapidity that escapes his consciousness. What quickness and despatch, in the exercise of bodily and mental powers, do even common characters display in their respective arts and professions? What rapid judgments are formed by the rope-dancer, the *ventriloquist*, the professors of *legerdemain?* It seems impossible to deny that the force of habit extends also to those pure movements of mind now under consideration, so as to bring them within the range of improvement. Let us next inquire what are those means of improving them which may be included in the discipline of a first class of philosophy.

It is admitted, on all hands, that these processes and habits of mental action cannot be attained either

by rules and precepts, or by study and premeditation. If any thing can be done in this way, it must be by placing Students in situations and circumstances which render their exercise indispensable or necessary, and in encouraging and assisting it. We cannot, indeed, anticipate the real scenes and occasions of future life, which may call forth habits of actions; but we should approach them as nearly as can be done in a system of education: and certainly Students may be placed in circumstances favourable to the acquisition of these habits. This is one of those advantages of a public education, to which a private education can lay no claim. To counteract doubt, hesitation, and procrastination, in the Student, the sources of so much evil and unhappiness in life, Exercises should be prescribed to him which admit not of delay;—questions should be asked which oblige him immediately to take his ground; and encouragement should be given to those who discover the greatest activity and despatch. Again, to enable the Student to apply his faculties to any subject with the same ease, in the presence of others, as in private, let him be accustomed to stand up in his place, to collect his thoughts, and to express them, on subjects so selected as to require him, upon the instant, to survey his store of knowledge, and to bring forth what may be necessary for his present purpose. And, as it often occurs that the Student is totally discouraged from making any attempt, by the first

view of the difficulties which attend it, every thing should be done, on the part of the Teacher, to overcome this repugnance, and to encourage him to make a voluntary effort to a certain extent, at least, in the full assurance that his future efforts may be more successful.

Many of the subjects of Exercises already mentioned, and which have been executed with study and premeditation, may be fitly employed for the acquisition of those habits now under consideration. Some of these are proposed to the class as subjects for *extempore* discussion; and, after a few moments' consideration, such Students as think themselves qualified, are desired to explain the subject in their own manner. On the first opening of it, if any difficulty occur, the Professor conducts them through the first and preliminary step, and then leaves them to proceed in their own way. When one Student has concluded his account, it is asked, whether there be any others in the class who may choose to enlarge, or to correct what has been already advanced. It is necessary that the subjects thus proposed, for an instantaneous display of mental activity, should have a relation to the knowledge the Students may be supposed to have acquired from the Lectures, or their own observation. On such subjects, they are required to collect, to arrange, and to express their knowledge, and to trust to their particular resources for the accomplishment of the proposed end.

In following up this plan, the Professor puts in requisition the knowledge acquired from the perusal of history. With a view to this exercise, in the beginning of the Session, the Students are advised to fill up the time which the daily business of the class may not require, by reading the histories of rude and of uncivilized nations. They are afterwards required to give an account of certain subjects within the supposed course of their historical studies. Suppose the Student has been engaged in the narratives relative to rude and unpolished nations, many questions may be asked respecting their government, their arts, and their occupations. The effect of such inquiries is to accustom him to arrange and express his ideas, and to afford a strong motive to read with attention and interest.

Experience has taught me to render this exercise particularly useful to one description of Students. There are always some young men, in a numerous class, who, either from their early years, from aversion to scientific study, from habits of idleness already contracted, or from the defects of former discipline, in spite of every effort that can be made to induce them to exertion, do not enter heartily into the business of the class; and who accordingly, though obliged to give their personal presence, are usually seen to sit with vacant and unoccupied minds, sometimes to the annoy-

ance of their more industrious neighbours. Keeping in view this class of Students, I have found it useful to enjoin more particularly upon them the reading of history, and of the classics, which is confessedly within their reach, and of the substance of which a regular account, from time to time, is required.

In following out the plan, an easy aphorism of Lord Bacon, a maxim of ancient or modern Philosophers, or a sentiment in a classical author, is proposed, of which immediate explanation is required. When the Students have distinctly conceived it, they are required to take their ground, and to state, in order, the particulars which it contains. When one is not successful, another is called on to repeat the effort. The whole is concluded by the Professor pointing out the causes of any difficulty which may have occurred, and suggesting a proper explanation and arrangement.

It is unnecessary to add, that a full and complete explanation of those subjects cannot be expected from such extemporaneous efforts. That is not the object in view. The purpose of the exercise is to accustom the Student to exert his intellectual faculties without preparation,—to render him prompt in expedient, and active in resource,—and, at the same time, to accustom him to facility in expressing his sentiments.

On some occasions, this mode of discipline is particularly directed to the powers and habits of deduction :—a probable proposition is suggested, and such of the Students as think themselves qualified to take part in the discussion, are desired to support one or other of the sides of the argument, with such reasons as occur to them at the time. The following are some of the propositions which have been proposed. "Wisdom is better than riches." "With ordinary talents, the diligent man is more likely to be successful than the man of genius." "A public is preferable to a private education." "An institution of prizes is useful." "The habit of reading novels is hurtful to the Student," &c. &c. When any one of these propositions is proposed, after a few moments of consideration, the Students are required to choose their side; when those who think themselves prepared are called upon to maintain the proposition, by bringing forward an argument in defence of it. This being done, another is required to state the objection. The former is then allowed to reply; and other Students are called upon for additional arguments and objections, till the subject be exhausted. During this exercise of ratiocination, an argument, or objection, that may have been overlooked, is occasionally suggested by the Professor, and an immediate answer is required.

This exercise is sometimes carried on with still more formality. The Students are informed, the

preceding day, of the subject proposed for argumentation, that they may come to the discussion with arguments, and objections, ready for the conflict. They are required to state the arguments and objections simply and distinctly, without any thing extraneous or declamatory. It is the duty of the Professor to keep the disputants closely to the subject; to interfere whenever he finds it necessary; and to continue the dispute no longer than he thinks proper or useful. When the business of argumentation is finished, in order to secure the attention of the other Students to its progress, a recapitulation is required, from those who were not engaged in the disputation, of the various arguments and objections, which may have been advanced on either side.

This method of discipline was suggested by the scholastic practice of disputation: and it is certain that the characteristic acuteness and ingenuity of the scholastic Philosophers were, in a great measure, to be ascribed to the Aristotelian mode of debate, which was cultivated, in those days, with much industry and ambition. It is equally obvious that, in the details, it had a manifest tendency to accustom the youthful mind to discrimination and accuracy in its conceptions, to a reliance upon its own resources, and to a ready command of language and expression. The scholastic discipline, however, with all these advantages, was attended with several bad effects,

in some degree, perhaps, inseparable from the habit of mind which it generated. The disputations were too frequently directed to frivolous subjects; they were often maintained with violence and pertinacity; and thus afforded, to such of the disputants as were so disposed, an opportunity of gratifying the most malignant satire, and of indulging in the most vexatious ridicule. Nor was this petulant and wrangling spirit confined to the formal exercises of the school; on the contrary, it has been remarked, by those who have drawn the character of those times, that the same pertinacious and pedantic manner which infected the college and the monastery, was carried into society, and applied to the ordinary business of life.

I am, accordingly, satisfied that disputations, carried on in the scholastic manner, are, in many respects, hurtful, and ought not to be admitted as a branch of public education. Were there no other disadvantages, it would be a sufficient reason against the general use of it, that the forward and petulant would engage the whole attention of the class, and drive the more bashful and meritorious altogether off the field. Nor would it be an easy matter for the Professor to keep these youthful disputants within bounds. It is hoped, however, that these hurtful effects are, in a great measure, prevented by the chastened and limited mode of disputation which I have endeavoured to

establish, in which I never allow the subject of debate to go out of my own hands.

These Exercises are concluded by an attempt to apply the powers of investigation, and of reasoning, to the arguments commonly adduced in proof of the belief of a First Cause, and of the necessity of a Revelation. This is not done by any regular lecture on the subject, which falls more properly under the department of another class, but in one of those modes of conversation which has been mentioned, in which the Students are required, without preparation, to bear their part. The principles and facts on which the conclusions on these doctrines are founded, are separately stated, in the order in which they are most likely to be clearly conceived by the Students. On each of these, they are desired to express the notions which they entertain, and the illustrations which have occurred to them. This affords an opportunity to the Professor of rectifying, enlarging, and confirming the grounds on which their belief and conviction of these fundamental truths ought to rest. These are subjects in which the Students have great interest; and just notions, thus early communicated, may tend not a little to fortify their minds against the attacks of sophistry and infidelity, with which they may be assailed; and to put them in possession of those weapons of defence which are furnished by enlightened reason. The whole of this part of the

subject is concluded with an earnest advice to the youths, never to commit themselves rashly, or to be forward in expressing their opinions on such subjects;—to listen, at all times, to the suggestions of reason and of truth; and, in general, to canvass such subjects only with those who, like themselves, are desirous of forming their opinions on the basis of rational and solid evidence.

ON ACADEMICAL DISCIPLINE.

The method which has here been explained of conducting the first Philosophy class, is much assisted by the simple and rational system of discipline established in the University, and by an institution of prizes, relative to the objects of the course.

The University of Glasgow is vested, by Royal Charter, confirmed by Acts of Parliament, with such jurisdiction over the Students as the other ancient academical institutions were in use to possess. These powers originally extended to the cognizance of crimes, even to that of capital offences; and there is extant a document, containing an account of one trial, involving the highest punishment, which was carried on before the

Rector of the University and his Assessors, towards the end of the seventeenth century. There seems also to have existed a large code of statutes, respecting the studies, conduct, and manners, of the Students, of the same kind with those that are still in force in some Universities: and, if we were to judge by the multiplicity and severity of these laws, we should conclude that it must then have been held to be an arduous task, to keep under proper controul the inmates of a College. The greatest part of these rules, however, have long since fallen into desuetude in this University; leaving only a few practical regulations, which effectually serve all the purposes of academical legislation. These are read every year at the beginning of the Session, in the hearing of the whole Students; and, by these laws, their conduct is regulated, and their delinquencies punished.

The discipline of the College is, in the first instance, committed to the Principal and the five Professors of Languages and Philosophy, who constitute what is called the JURISDICTIO ORDINARIA, a court of summary procedure, without any record; which meets as often as occasions require, and adjusts all matters of common delinquency, its decisions being subject to the review of the Rector, Dean, and Faculty at large.

This mode of discipline is conveniently conducted by a meeting, every Saturday, of the *Ju-*

risdictio Ordinaria in the Public Hall, where all the Students of Language and Philosophy are convened, and a Latin oration is delivered by the senior Students, which oration is afterwards committed to the *Jurisdictio Ordinaria*, who, after examination, bestow a prize, on the first of May, on the author of the best composition. This general meeting is attended with many advantages. The catalogue of all the classes is called over. The Students are brought under the view of the Professors, who have thus a convenient opportunity of giving and receiving information respecting individuals in the several classes, and of administering advice, and remonstrance, as circumstances may require. Upon these principles, and, often, without an hour's interruption of study during the whole Session, is the necessary discipline of twelve or thirteen hundred Students regularly administered. If too much importance be not given to forms and ceremonies which have no tendency to promote science; if nothing is required of Students but what is necessary and useful; and if their minds are kept in a constant state of activity, in regard to their studies, the rules of academical discipline need not be numerous. It is not, however, pretended that there is any thing uncommon in these arrangements, or that all our Students are equally regular and mindful of their business; but it deserves to be mentioned, as an advantage arising from this state of things, in which the greatest part of the Students, actuated by a spirit of indus-

try and laudable emulation, are fully occupied in their pursuits, that the few who are of a different cast are carried almost involuntarily forward to certain degrees of improvement, as they must, otherwise, find themselves in a state of degradation and contempt, from which young persons of common feelings will naturally desire to escape. When the irregularity and disobedience of any individual have become inveterate, so as to obstruct the application of others, he is, by a short process, expelled from the College.

The discipline of each class is committed to its own Professor, who may call for the advice, or invoke the authority, of the *Jurisdictio Ordinaria*, if he finds it expedient. The chief part of this discipline consists in requiring, and enforcing, the regular attendance of the Students at the hours of public lecture and examination. This punctuality is indispensable in every course of education; for, when Students do not attend their classes regularly, they can expect little or no benefit. The good effect of one day's attendance is lost by the absence of the next.

Nor is it only necessary that the Students should attend; the Professor ought to know whether they be present. There seems to be no way of ascertaining this, but by regularly calling over a catalogue of the names of the Students, every hour before entering on business, and there is an additional

reason for calling the catalogue when any Theme, or Exercise, is due. Two Students, called Censors, are accordingly appointed in rotation every week; the one for taking an account of the Students who are absent, and the other, of those who fail in presenting their Themes at the appointed time. To facilitate this duty, the catalogue of the Students is annually printed. Those who cannot give a sufficient reason for absence, or for the want of Themes, have imposed upon them a more laborious task, and sometimes a small fine; and regularity of attendance is considered as one of the requisites to entitle the Student to the honour of a prize at the termination of the course. By these means, the Professor ensures the punctual attendance of the Students at the hours of lecture and examination; and, in point of fact, very few instances occur, during the Session, of irregular attendance.

The preservation of order, and the correction of improper behaviour, during the hours of lecture and examination, cannot be a very difficult matter, where the Students have such an interest in their business, as it is our object to excite. If they do not give attention to the lecture, they cannot be prepared for the examination, nor, consequently, for executing the Themes which are founded upon the lectures. Every object, and every occurrence, must turn them inward upon themselves, and put them in mind of their own carelessness

and insignificance; and of the disappointment they are preparing for their parents and friends. Even the frequent accents of praise and approbation, which fall upon virtuous and emulous Students, must occasionally excite feelings which it would be painful to describe. When, besides, the Professor is in possession of the esteem of his Students, the fear of incurring his displeasure, and the desire of being favoured with his approbation, will generally prove the strongest of all inducements to regularity of conduct.

ON THE INSTITUTION OF PRIZES.

The objections sometimes made to the use of emulation, in systems of public instruction, are chiefly founded on ignorance; or, at all events, on an injudicious application of that most active and animating principle. Of all the faculties and desires with which the human being is endowed, no one seems more capable of ministering to his improvement than that under our consideration; for, at every period of life, and in every rank of society, its influence is manifested in the most unequivocal manner, prompting the man as well as the boy; and in the cottage, as well as in the senate and in the field, to engage in competition with their

fellows, regardless alike, in most cases, of the mere prize wich calls them to the list, and of the labour by which it is to be obtained. The principle of emulation, indeed, seems intended by the great Author of our frame, to supply the want, or to make up for the weakness, of other motives to action. The love of knowledge, for example, cannot create exertion, until the pleasure attending that acquisition has been, in some degree, experienced. The sense of interest too, and the feeling of duty, are not of very powerful efficacy in the youthful mind. The prospect of distant advantage makes but a faint impression, when counteracted by the seducements of pleasure, or by the arguments of idle companions; but the spirit of emulation overcomes all obstacles, and supplies all deficiencies, animates the Student to the most arduous attempts, and sustains his perseverance amidst the severest labour.

And why should not the public teacher, who has so many difficulties to encounter, avail himself of the advantages with which he is thus supplied, and follow out the path so clearly delineated to him by the very finger of nature? It is, no doubt, considered by some as altogether derogatory to the dignity of science, that its precious treasures should be obtained indirectly, and not sought for, purely and solely, on their own account. Others again have maintained, that to excite emulation among young men at College, is

only to stir up amongst them jealousy, envy, and a thousand similar causes of irritation. These opinions, however, are all so ill founded, and connected with views of human nature so narrow and unphilosophical, that I cannot allow myself to waste time in exposing their absurdity; and I am satisfied, that, upon the minds of those who have had any experience in the education of youth, and who have thereby become acquainted with the more energetic springs of action in the mind of a Student, these objections will make no impression but that of ridicule or contempt.

It will, indeed, be readily admitted, that the practice of giving prizes, which has long subsisted, in one shape or other, in most seminaries of education, has not always been regulated by just views of advantage. In the *first* place, they are commonly proposed to Students who have already distinguished themselves by genius or proficiency, and are already possessed of academical honours. Few or no prizes are proposed to under-graduates; and thus the great body of the Students, including those who stand most in want of excitement, are altogether shut out from the operation of that powerful feeling, which so frequently sustains the youthful spirit in the pursuit of excellence. Again, the greater number of the prizes, proposed in our seats of learning, are confined to single Essays, which are written on certain occasions, on determinate subjects, and ac-

cording to fixed rules; whilst no means are employed, or, indeed, can be successfully employed, to ascertain whether such productions be actually, and *bona fide*, the works of the individuals in whose names they are claimed.

But, to be productive of general utility, the principle on which prizes are awarded in a College, must rest on a very different foundation from that now alluded to. The influence of the system must be felt through the whole academical establishment, extended to every description of Students, and modified according to their age, progress, and other circumstances. The honours and rewards attending it, too, must be bestowed on such a principle as to come more or less within the reach of every degree of talent and industry, and to excite hope and expectation in every breast. None must have reason to consider themselves excluded, but such as exclude themselves, by idleness or bad conduct. Nor must these honours be conferred for single efforts, or upon occasional instances of success; but, on the contrary, they must be so distributed as to be considered the reward of habitual industry, combined with talent—of regular and spirited exertion, in every part of the Student's business—of general merit and eminence, in the ordinary exercises of the class—and also, for progress and improvement in the habits of composition. The great object of the Teacher ought to be to carry his pupils so

far; and, thus far advanced, they will find themselves at once prepared and inclined to go farther.

The number of prizes in any class must, no doubt, be, in some degree, proportioned to the number of competitors; though this, for obvious reasons, cannot be done with perfect exactness. There must be a step within the reach of every individual; and the partialities of self-love will sometimes induce the Pupils to place this higher than it would be fixed by the judgment of the Master, and thus occasion unavoidable disappointment. In the case of literary competition, the maxim of Virgil cannot be strictly adhered to, "Nemo—non donatus abibit;" for it is the success of some, and the defeat of others, whence spring the interest and struggle of which the Teacher here avails himself, to further the progress of his Students. One point, however, must be fixed, as far as the nature of the thing will permit, which is, that every individual must be satisfied, that the honour for which he is a competitor will be awarded with the severest impartiality and justice.

It is with much diffidence that I mention the scheme of giving prizes, which has been long established in this University. It is confessedly imperfect, requiring to be matured by farther experience; still, I believe, it is the first regular attempt that has been made to extend the principle

of emulation to every order of Students, and to all departments of study, in such a Seminary of learning; and it is therefore hoped, that the account now to be given of it will be received with candour, as professing nothing more than a hint to others, who may hereafter carry it to higher perfection.

The institution of prizes, according to the principle now acted upon in this University, was introduced somewhat more than thirty years ago. Before that period, one or two prize-essays were occasionally prescribed here, with the restrictions and conditions which usually accompanied them in the few cases where they were to be found in similar establishments of education. Nothing farther had yet been attempted. It occurred to some of us, that this mode of procedure was nearly tantamount to a total exclusion of the principle of emulation from the business of Colleges; whilst its powerful operations were acknowledged in every other department of human pursuit. It is with much satisfaction, then, that I can add my name to those of my much respected colleagues, the late Mr. Richardson, Professor of Humanity, and Mr. Young, the present Professor of Greek, who heartily concurred with me, in laying the foundations of this institution. The plan, of which we had thus privately arranged the outlines, was first realized in our own classes, and was, indeed, for some time, confined to them. Experience, however, not only verified all our expectations, but

soon recommended our example to others in the University. The principle of action, which we had brought into play, speedily manifested its good effects, by rendering our Pupils more regular in their attendance, more eager in all their endeavours to excel, and by infusing into them a stronger spirit of industry and application.

In a short time, as has just been observed; the practice now under consideration was introduced into all the other public classes; and it suggested, moreover, to the Senatus Academicus, the expediency of extending the principle still farther, by prescribing, to the more advanced Students, at the end of every Session of College, a number of prize-essays, to be executed during the ensuing vacation. Of these essays the subjects are very various, as selected from the wide fields of science and literature; and the premiums, as is usual in such cases, consist of medals, both gold and silver, of books, and, even in some instances, according to the direction of the Donor, of specified sums of money: for, I have much pleasure in adding, that several opulent and liberal-minded persons, in token of their approbation of this part of our system, have supplied us with a certain amount of annual revenue, for its maintenance and extension. For determining, again, on the merit of the several essays given in, a Committee of Professors is appointed, some time prior to the date at which the prizes are bestowed, who meet regularly to hear them read, and who, afterwards,

without, of course, knowing the names of the authors, decide formally which of them are entitled to the respective premiums. The first of May, the usual termination of the Session, at least in the philosophical department, is the period fixed for the public distribution of the premiums to the successful candidates; and this anniversary now exhibits one of the most interesting spectacles that can well be imagined, being attended not only by the Students in the University, by the Principal and Professors, but by a great number of Clergymen from the town and neighbourhood, and by many country gentlemen. On these occasions, some suitable portions of the successful essays, whether in prose or verse, are read by their authors; thus affording at once an opportunity to judge of their merits, and an additional incitement to the great body of the Students.—But the object which I have more immediately in view, in this detail, is to give an account of this institution, so far as it respects the first class of Philosophy.

As soon, then, as this class is fully convened in the beginning of the Session, a day is appointed for explaining distinctly, to all the Students, the grounds upon which they are to enter into competition for the honours which are to be conferred at the end of it, and for placing before their eyes the scale of merit, according to which their determinations, in that matter, are to be regulated. It is then particularly stated, that the prizes are to be awarded

upon a judgment formed, *in cumulo*, of their diligence, proficiency, general abilities, regularity, and propriety of conduct and manners. They are informed, in short, that those Students who are most distinguished in the whole business of the class, and throughout the whole course of the Session, are to stand highest on the list of successful candidates.

The field of competition being thus defined, and the standard of merit established, the young men are requested to keep their minds steadily fixed upon the one and the other; being assured that, in the scale which measures the latter, there are several degrees, and that it is in the power of every one of them to fix his name on it, somewhere between the two extremes. In order, too, that these enviable honours may be more accessible to all, and the competition made as equal as circumstances will permit, the class is divided into Seniores and Juniores; it being understood that such of the two divisions as occupy corresponding places in their respective lists, possess equal merit, and are entitled to the same honour, in the eyes of their class-fellows, and of the University.

From the day that this arrangement is made, and the path of competition is clearly marked out, the spirit of emulation begins its work, and continues to operate, in the minds of by far the greater number of the Students, until the very

end of the Session. Though the object at which they strain be still at a great distance, their hopes and expectations keep pace with all their labours; and often do they breathe, with tumultuous feelings, the ardent wish of Sergestus, in the Trojan games:

> "Non jam peto prima, Mnestheus; nec vincere certo:
> "Quanquam, O!" &c.

During the progress of such a varied and lengthened competition, many circumstances will occur to rivet their minds upon the standard by which their labours are to be estimated; and this reference will sometimes be made with the hope of success, and not unfrequently with the fear of disappointment. In such circumstances, the Teacher will find it incumbent upon him to afford them, as far as he can, the means of judging with respect to the issue of the conflict. Without the gift of prophecy, he may disclose to them, what it is chiefly of importance they should know, and constantly remember, namely, that, other things being equal, those will be most successful in obtaining prizes who are most deeply interested in their present business, and who have the greatest pleasure in performing their various exercises. He will tell them, that the premiums will certainly fall to the lot of those who receive instruction with patience, and willingly submit to sacrifices, in order to improve by it;—of those who, every

morning, take their places in the class, with the unfeigned desire of adding to their knowledge, and of making progress in the path of science;—of those who execute every part of their business with punctuality and fidelity, disdaining the miserable shifts and evasions of the thoughtless and the idle;—of those, in fine, who, when they have finished the labours of the day, can lay their heads upon their pillows, with the soothing consciousness of having done their duty. Such, in general, he will add, is the character of those individuals whose names will stand highest in the ranks of merit at the close of the Session. Such is the conduct of those who are to compose the happy band with whom their Teacher will be surrounded on that auspicious day which will reward all their exertions and sacrifices; from whose delighted countenances he will derive the sweetest compensations for his toils, and in which he will discover the presages and pledges of still greater achievements.

One difficult and very important part, in administering the system of prizes, still remains to be stated; namely, the method by which the different degrees of merit among the Students are ascertained and determined; a point in which any error with regard to principle, or suspicion of practical mistake, would completely destroy all the good effects aimed at by the establishment in question. It has been already mentioned, that the qualifica-

tions which form the ground of competition for the class prizes, as they are sometimes called, and which, at all events, are to be distinguished from the University prizes, are diligence, regularity of attendance, general eminence at the daily examinations, and in the execution of Themes, propriety of academical conduct, and habitual good manners; and, on these heads, it is very obvious, a judgment must be pronounced either by the Professor, or by the Students themselves, as no others have access to acquire the requisite information.

It may be imagined, at first view, that the office of judge here would be best performed by the Professor; but, after long experience, and much attention to the subject in all its bearings, I am inclined to give a decided preference to the exercise of this right as vested in the Students. Were the Professor to take this office upon himself, it would be impossible, even with the most perfect conviction, on the part of the Students, that his judgment and candour were unimpeachable, to give full satisfaction to all parties: whilst, on the other hand, were there the slightest reason to suspect his integrity, in either of these points, or the remotest ground for insinuation that he gave undue advantage to any individuals, in bringing forward their claims to the prejudice of others, the charm of emulation would be dissolved at once, and every future effort among his Pupils

would be enfeebled. Students are naturally very jealous with regard to every appearance of favour, or partiality, in the conduct of their Teacher. The caprices of an ambitious mind are easily provoked, and are not more reasonable in their nature than those of the lover; and, in the circumstances of which we are now speaking, the expressions of the Professor, whether of approbation or disapprobation, his smiles and his frowns are watched with keen and interested eyes, by all who have engaged their feelings in the competition. Indeed, the incidents, unavoidable in the practice of teaching, which have been known to excite suspicion, are truly amusing, and, at the same time, full of admonition to every Teacher. If he speak to one Student, and not to another, if he examine one a little longer or shorter than usual, if the remarks made on a particular essay seem to occupy too much or too little of his time, if approbation, or censure, be expressed with coldness or with more than ordinary warmth, the more jealous and peevish of the young men feel their minds tortured with apprehension that they are wilfully overlooked. Even more trivial occurrences than these prove the occasion of alarm. If an individual happen to be examined oftener than the rest, there are some who will consider such an event as a mark of favour, whilst others would view it as a plot to expose his ignorance. It may be remarked, in passing, that, to prevent such suspicions, and to do real justice to all, the Profes-

sor keeps before him a catalogue of his class, and puts a mark at the name of every Student who is examined, or whose exercise is read; by which means, although they are not called upon in any regular order, every Student is ultimately placed on the same footing as to his public appearances. But even this precaution does not always satisfy, or preclude unpleasant surmises.

To return, however, to the mode of determining the prizes in the Logic class, I repeat, that they are adjudged by the Students themselves, guided and restricted by certain rules laid down for that purpose; and, as this method of decision has been regarded by some as objectionable, it will be necessary to explain it a little more at length.

The indispensable qualities of good judges, then, are a competent knowledge of the grounds and evidence upon which their judgment is to rest, and a firm resolution to determine on the matter before them with strict impartiality. It is presumed that the Students, in these respects, are sufficiently qualified. They are every day witnesses of the manner in which the business of the class goes on, and have, accordingly, the best opportunities of judging as to the merits of their fellow-Students: they have it in their power to observe the regularity of their attendance, and the general propriety of their conduct; they hear the questions which are put, and the answers which are given;

their various Themes read aloud, and the observations made on them from the chair. They have likewise an opportunity of comparing the respective merits of all the competitors, in the extemporaneous exercises of the class; and they, no doubt, frequently hear the performances of one another canvassed in conversation, and made the subject of a comparative estimate. Besides, as every individual is, himself, deeply interested, it is impossible but that he will pay the closest attention to what is going on around him; whilst he cannot fail to be aware that he, in like manner, is constantly observed by others, and subjected to the ordeal of daily criticism. In truth, the character, the abilities, the diligence, and progress of Students are as well known to one another, before the close of the Session, as their faces or their dress: there cannot, therefore, be any deficiency as to means of information to enable them to act the part of enlightened and upright judges.

But they likewise possess the other requisite for an equitable decision: for the great majority of them have really a desire to judge honourably, and fairly, on the merit of their fellows. The natural candour, and generosity of youth, the sense of right, and obligations of justice, are not yet so perverted, by bad example and the ways of the world, as to permit any deliberate intention of violating the integrity on which they profess to act, or any wish to conspire together in supporting an

unrighteous judgment. There is greater danger, perhaps, that young persons, in their circumstances, may allow themselves to be influenced by friendship, or personal dislike, rather than by the pure and unbiassed sense of meritorious exertion, or good abilities: but, on the other hand, when an individual considers of how little consequence his single vote will be among so many, it is not at all likely that he will be induced to sacrifice it either to friendship, or to enmity. There are, however, no perfect judges in any department of human life. Prejudices and unperceived biasses make their way into the minds even of the most upright of our fellow-creatures; and, there can be no doubt that votes are sometimes thrown away, or very injudiciously given, by young Students in the Logic class. Still, these little aberrations are never found to disturb the operation of the general principle on which the scale of merit is determined, and the list of honours filled up.

Though the Professor takes no immediate share in this business, by giving his vote, his habitual conduct, and the occasional expression of his opinions, have no small effect in forming the judgments of his pupils, and in keeping them from misapprehension and prejudice. Indeed, the maintenance of this salutary but imperceptible influence is an object which he preserves in view, from the beginning to the end of the Session. On the day when the prizes are first announced to

the class, it is solemnly impressed upon the minds of the young men, that the utility of the institution depends wholly upon the purity and impartiality with which it is administered—that it rests almost entirely with themselves whether it is to prove highly beneficial to the cause of good education, or to be rendered useless, and positively hurtful; and that they individually have the deepest interest in the just and impartial direction of the principle, upon which the system is founded,—a fair and open competition. On every subsequent occasion, too, when any reference is made to the institution of prizes, it is uniformly held up as an essential branch of College discipline, and as intimately connected with the success of Education. With respect, again, to the ultimate determination and adjudgment of these honorary tokens, the Students are expressly prohibited from indulging in loose conversation with one another, and particularly from soliciting, or receiving, any promises of support. Such as are found to disobey these injunctions are considered as academical traitors, viewed with contempt and reproach; and if the fact be proved against them, they are subjected to a forfeiture of their privilege as voters, and deprived of the honours which they themselves may have otherwise deserved.

The habit of viewing the institution in this light, and hearing it constantly spoken of as a

matter of the first importance, naturally creates, in the breasts of Students, a species of reverence for the thing itself, and a chivalrous feeling of honour with regard to the function with which they themselves are charged. There are very few, indeed, who are not seen to despise every thing unfair and unequal in the competition, as well as in the exercise of their suffrage towards their class-fellows; and it is a general remark that those who display most diligence and spirit in the prosecution of their studies, are the most intelligent and honourable in appreciating the merit of others. It is only the idle and the dissipated who are found to disgrace themselves by unfair and incorrect opinions, in awarding those honours to which themselves have no claim.

The nearer the day approaches on which the determination is to take place, the young Students are more likely to be influenced by some of the deceitful feelings to which I have alluded, and to allow their passions to interfere with their better judgment; on which account, an opportunity is taken to impress upon their minds, once more, the principles which ought to regulate the vote they are about to give, and to divest them of every undue prepossession relative to the several candidates. When the day arrives, the Professor, deeply interested, as he cannot fail to be, in the business upon which they are going to

enter, addresses them in terms of affection and kindness, representing to them, in the strongest language which he can employ, the importance and sacredness of the decision in which they are immediately to bear a part. In particular, he solemnly and explicitly informs them, that they must not hope, merely on account of their youth, to escape the imputation of rash, or partial judgments; reminds them that they are moral agents, and, already, as strictly accountable for actions of which they have a complete knowledge, as ever they will be, at any future period of their lives; states to them that to deprive a fellow Student of a prize, to which he is fairly entitled, is not only an act of gross injustice, but of cruelty, and which cannot be palliated by the plea of thoughtlessness; assuring them that a Student of emulation and proper spirit will consider it a greater injury to be robbed of well-earned honour, than to be subjected to any other species of privation. He even proceeds farther than this; for, addressing himself to the reverential and pious feelings, inherent in generous minds, he thinks this no unsuitable occasion to remind them that they act under the immediate inspection of that Omniscient Being, who cannot look upon crimes of any kind but with detestation and abhorrence. With this preparation, the catalogue is called over; and the question, put to every individual, is expressed in these terms: "Whose name shall stand at the highest degree in the scale of merit, *inter Seniores?*" The same

question is then put, *ad Juniores;* and it is repeated, until the several degrees in both scales are filled up: upon which the names of the successful candidates are inscribed with acclamation.

Whatever doubts or objections may be urged against this mode of adjudging the prizes, in a first class of Philosophy, the proof from experience is a complete answer to them all. I have, at least, fully satisfied myself, by the closest attention to this subject in every point of view. For example, on the evening of the day prior to that on which the determination is to take place, I have, every year, studied the catalogue containing the names of the Students, with the intention of ascertaining how far a list made out by myself would correspond with the arrangement to be afterwards fixed by the votes of the class; and I have to remark that, in no one instance, did my judgment, with respect to the first prizes, differ from that actually given by the Students. In descending the scale, the difficulty of appreciating degrees of merit, where it is less prominent, is, no doubt, considerably greater, and there, small differences of opinion accordingly have sometimes occurred. Upon more minute attention, however, I have frequently found reason to prefer the judgment of the Students to my own; and it is certainly highly honourable to the candour and ingenuousness of youth to state that, with few exceptions, neither

friendship, nor enmity, nor national feeling, has ever disturbed the right order of determination. With respect to the first prize, indeed, about which the emotions of rivalship and envy are the most warmly excited, it is often awarded to strangers, in preference to friends and brothers, and to English, Irish, Scotch, and Americans, without any perceptible distinction. It may be thought singular, but it is true, that, in the course of forty years, not above one or two complaints have ever been made to me, founded on the suspicion of impropriety, or injustice, in relation to this matter; and there can be no doubt that there would have been many complaints every year, if the determination had rested with the Professor.

When the prizes are all voted, the Professor brings the business to a close, by addressing the successful and disappointed respectively, in such terms of approbation, sympathy, and kindness, as the occasion seems to require.

I have now explained, and with too much minuteness, perhaps, the method of conducting the first studies of those who enter upon a course of philosophical education in this University. The great object of the course, it will have appeared, is to combine the communication of such elementary knowledge as may seem necessary for furthering the subsequent pursuits of the Students, with a system of exercises, calculated to form, in

their minds, those intellectual habits which are indispensable at once to the cultivation of Science, and to the business of active life. And I have no hesitation in adding, that every system of public education which does not proceed on that principle, and embrace those means of improvement, is greatly and radically defective.—It is hoped, too, that the manner of conducting the practical business of the class is calculated, in some degree, to infuse into the minds of Students such spirit and emulation as will sweeten labour, and stimulate to the highest degrees of exertion in performing the tasks assigned to them. It is farther claimed for this plan of conducting philosophical education, that it secures many of the advantages of a private, or domestic education, whilst it obviates some, at least, of the evils which are supposed incident to a public one. I do not here mean to enter into a comparison between private and public instruction—a question much agitated both in ancient and in modern times—my object is to show, what has been much less attended to than it ought, that the principal advantages of each may, to a considerable extent, be united, without involving any sacrifice of either.

For instance, in this mode of education, a close and intimate connexion is established between the studies of the evening, and the exhibitions of the Student on the following day. It is understood, as a solemn stipulation entered into, betwixt the

Professor and his Pupils, at the commencement of the session, that a certain portion of time shall be set apart, every evening, to be employed in preparing for the public appearances of the following day. For the faithful employment of this time, the Students are held strictly responsible to their Teacher; and, from the daily examinations, as well as from the written exercises, which, during the first three months, are required almost every day, he knows exactly what preparation has been made, and whether the preceding evening has been properly occupied. Whenever, also, he perceives, in any individual, symptoms of failure, or relaxation, he puts the question directly, in the presence of the whole class, how the evening was spent, and demands a specific answer. When, again, in the latter part of the session, Themes are prescribed, which require five or six days for their execution, the Students are requested, when half that time is expired, to produce their Essays in an unfinished state, that a judgment may be formed of the progress which has been made. This expedient is intended, of course, as a check upon the idle, and to secure their application, in the intervening space; and, chiefly indeed, to prevent all the Students from trusting, as young persons are very apt to trust, to a hasty preparation at the last moment. In this way, the Professor exercises a superintendence over the private studies of his Pupils; directs, to a certain extent, their course of reading; and possesses, in no small degree, from his daily

scrutiny, the means of checking and stimulating the thoughtless and the indolent, even when they are out of his sight.

It is another good effect of this system, too, that it places the Students in such circumstances, with regard to the sense of shame, and respect for character, that they stand nearly as much in awe of one another as of the Professor, and are impressed, in both cases, with a corresponding responsibility, as to improvement in their studies, and general good conduct. Their public appearances are made, every day, in the presence of the whole class; and they know that, at a period not very distant, much will depend upon the opinion which shall have been formed of their regularity, their attention, and progress. Whilst engaged in study, during the evening hours, it is impossible but that they must look forward to their appearance next day, in the presence of a numerous band of class-fellows, eagerly exerting themselves in the same field of competition, and of a teacher zealously interested in their success. —All these circumstances combined, constitute perhaps a stronger and more natural species of restraint on the minds of ingenuous and spirited young men, than that which arises from the watchfulness of private tuition; and are certainly better suited to prepare the Pupil for the business of the world, where he will have much competition to encounter, and where he cannot always

avail himself of the assistance of a Tutor. That plan of instruction is unquestionably the best, which has the most direct tendency to make the Student instruct himself, to put him in the proper track for acquiring knowledge, to inspire confidence in his own exertions, and to lead him to take pleasure in the activity of his own mind. When these objects are gained, the most valuable and the most difficult part of education is accomplished.

It will occur to most readers, as an advantage resulting from the system of education and discipline now explained, that it must obviate, in a great measure, the effects of bad example so commonly deplored wherever there is a concourse of young persons in a large public seminary. Perhaps the charges of vice and idleness, brought against such schools, are greatly exaggerated; and it is very certain, on the other hand, that these evils, viewed with a reference to youth, are not confined to places of public education. I have not any intention of repeating, in this place, what has already been frequently advanced on this very important subject, that, as boys cannot be shut up all their lives, and must meet with vice in their passage through the world, it is of little consequence whether they become acquainted with the ways of men a year sooner or later; that there are vices, perhaps equally dangerous, to be encountered even under the paternal roof,

notwithstanding every degree of restraint and watchfulness; and that the evils attending a public education, as they are more easily discovered, so are they more easily corrected. It is admitted, however, that there are dangers to be incurred, wherever a number of young persons are gathered together, and it is hoped that the constant employment and superintendence secured by the method of philosophical education adopted here, go a great way to provide an antidote. At all events, it is certainly a much better expedient for correcting vice and irregularity in Colleges than that adopted in some Universities, viz. the appointing high Officers for the detection and punishment of misdemeanours; which functionaries, as they possess no means of preventing improper conduct, can only act the part of spies, and must expect to be regarded with the dislike and suspicion which attach to informers. It is idleness and want of interest, in the pursuits wherein they are engaged, which most commonly lead to irregularity and faulty conduct in Students. Take away these, inspire a love for study, and create industrious habits, and you will at once supersede the invidious office of Proctor, and render obsolete all penal statutes. Occupy the Student's time, and use means to make him feel the spirit of emulation, respect for his own character, and reverence for his Teacher, and you will thereby abridge the labour of discipline, as far as regards regularity and decorum. These are the principles upon which we

endeavour to act in this University; and it is creditable to the characters of youth, to have it to observe that they are, in most cases, completely efficacious.

After the minute detail which has been given of the public and private business of the first class of Philosophy, I am afraid it may be thought by some altogether a Utopian scheme, and that neither the Teacher nor his Pupils can be supposed to execute the parts therein assigned to them. Formidable, however, as the task may appear, at first sight, it will be found, on nearer inspection, that nothing is required of either which demands more than ordinary talents, zeal, and industry. Let it be remembered, at the same time, that the duties of a Professor are more laborious and extensive than is commonly imagined; and that they cannot be fully discharged by devoting one, or even two hours a-day to their performance. He has, or ought to have, a definite object in view; and this object ought to regulate his hours of teaching in public, and his labours in private. A very great difference of opinion seems to have taken place on this subject of late, compared with the views and practice of the ancient Philosophers; for, while the latter are known to have spent many years in patiently training their Students in the mysteries of their profession, the former have brought the business of philosophical education within the compass of a nut-shell, by confining their labours to the delivery of a Lecture, once a-day,

during a short Session. The practice now mentioned is, to say the least of it, most irrational and ridiculous. Would we not laugh at the musician who should propose to teach young persons to play upon the harp or violin, by giving them a Lecture daily, during the winter months, without once making them touch the strings of either instrument? But the attempt to teach a class of young men to think and reason, and more particularly to form in their minds the intellectual habits upon which reasoning, speaking, and writing depend, by means of Lectures only, is more absurd and ridiculous still.

After all, the time and labour necessary for conducting the business of the first Philosophy class, in this College, are by means so considerable as might be expected. During the first three months of the course, the exercises performed by the Students are of such a kind that, by simply hearing them read in the class, the Professor, from his knowledge of the subject, and his experience in the details of teaching, can, at the moment, make such remarks, and give such instructions, in relation to them, as appear requisite; and it is only in the latter part of the course, when the essays given in are longer and more difficult, that it becomes necessary to devote an additional or third hour every day, for the purpose of reading and criticising.

ON THE EXTENSION OF THIS MODE OF TEACHING TO THE HIGHER DEPARTMENTS OF STUDY IN UNIVERSITIES.

It will require but little reflection to satisfy a candid mind, that the method of teaching which is found successful, in the earlier branches of Philosophy, will, with a few modifications, apply to the more advanced departments of it; for it is abundantly manifest that, as the same faculties of the mind are employed at every stage of philosophical investigation, the same principles of reasoning must be called in to guide their operations, and a similar mode of training be adopted to invigorate their powers. In passing from one department to another, there is only a change of object, a different set of materials to work upon; the intellectual instrument, the mental processes of analysis, discrimination, and arrangement, remaining unchanged. Whether the subject-matter upon which the attention is fixed be Logic, Ethics, or Physics, the method of teaching will imply only a slight change, as to the way in which the Professor exerts his talents and influence on the one, and in which the Students employ their abilities and industry on the other.

Perhaps, the greatest difficulty is already overcome; and the chief obstacle to this plan of

instruction removed, by the exertions made, in the first class, to form habits of thinking, and to create a love for study. In the formation of all habits, whether bodily or strictly mental, the first efforts are the least agreeable, and require, of course, the most unremitting endeavours on the part of both Teacher and Pupil: whence it follows that, whatever progress is made at this stage, in acquiring the use of the intellectual powers, and in deriving pleasure from their exercise, will proportionably facilitate the advancement of the Student in all his subsequent pursuits. His acquisitions in this field may be regarded as a free stock, ready to be employed in any future undertaking.

Still there is some reason to apprehend that the indolence or vanity of Teachers will supply them with powerful objections to this plan of study. The daily examination of Students, on the subjects discussed in their hearing, and the perusal of their Themes in private, with the view of reporting on them in the class, are employments of more drudgery than fame, and afford not the same opportunity for the display of eloquence, or ingenuity, as is enjoyed by him, who is known only to his Pupils in the character of a Lecturer. To submit to the labour of teaching would be to put himself on a level with the common school-master and artist, who are compelled to sacrifice a large portion of their time to the fatiguing duty of using all kinds of precept and example, with the view

of instructing the learner to perform what they themselves profess, and what they undertake to communicate. But, without repeating what has been again and again said on this head, I still maintain that, without imitating, to a certain extent, the examples now mentioned, no Professor can discharge his duty with facility and success.

The Professors of Moral and Natural Philosophy enjoy considerable advantages, in carrying on, in their respective classes, a plan of study similar to that which has now been described. The subjects of their Lectures present to the minds of youth comparatively strong motives and allurements to study. The various powers of action which are analysed in the Ethic class, such as instincts, appetites, desires, affections, and passions; the origin of moral sentiment; the development of those energetic principles which animate and impel the vast mechanism of human society; the grounds and distinctions of good and evil, of praise and of blame; the sources of depraved taste in the public mind, with the remedy, or antidote; the opinions of learned men in ancient and modern times, relative to the obligations of virtue; the qualities of mind and of action in which it consists; and the ultimate standard of excellence, as applicable to all ages and nations—these, and other similar inquiries, take a firmer hold of the youthful imagination, than abstract discussions on the generation of ideas, and on the means of intellectual culture. Theoretical

views and speculations, too, on the principles of government, of jurisprudence, and the history of civil society, afford ample scope for eloquence, and admit of various and very interesting illustration. In like manner, the subjects of Natural Philosophy, the beauty, the grandeur, and sublimity of the material world, are well calculated to gratify curiosity, and to prompt investigation. The application of analysis and induction to the phenomena of Nature, and to the interpretation of her laws, cannot fail to prove a delightful employment to the inquisitive Student: and, in one word, the Professors, in the two departments now referred to, will find no difficulty in arranging a proper system of exercise and mental culture, suited to the circumstances of the young persons under their charge.

The proficiency which the Students are supposed already to have made in the acquirement of knowledge, and of intellectual habits, may perhaps render daily examinations, in their case, less necessary, and, at the same time, suggest some alterations in the mode of prescribing Exercises. The essays, written in the Ethic and Physical classes, ought, for example, to be longer and more difficult than those to which the young men were accustomed in the Logic class, proceeding on a small stock of materials, supplied by the Professor, and subjected to a less indulgent criticism, both as to matter, and style of composition. Still

the Teacher, even there, must not trust too much to any appearance of superior advantage, as connected with the subjects of his course, or with the previous acquirements of his Pupils. He must not cease to use all the means in his power to stimulate their efforts, and to maintain their industry. He must remember that their intellectual habits are not yet fully confirmed; that they are naturally averse to labour; exposed to many temptations; and not always sufficiently masters of their determinations, to follow out the good resolves which they may have made. The former course of discipline, therefore, is not to be hastily abandoned. Its essential parts, and particularly the unceasing watchfulness which it exercises over the conduct of the Student, and the distribution of his time, ought to be firmly retained, and merely accommodated to the gradual change of circumstances, in which maturer age, and extended knowledge, are understood to place him. The spirit of emulation must not be allowed to expire; nor ought the feeling of responsibility, in relation to the Professor and the class at large, to suffer any diminution.

I have much satisfaction in stating that my respected colleagues, the Professors of Moral and of Natural Philosophy, approving of this system of teaching, have now had full experience of its numerous advantages, and are in the constant practice of examining their Students, and of prescribing

a regular course of Themes and Exercises, on the subjects of their respective Lectures.

It is hardly necessary to observe that this plan of teaching is equally applicable to the study of every branch of Science;—of Medicine, of Law, and also to that of Theology. In truth, whatever may be the subject of inquiry or pursuit, there is only one way of teaching it, namely, that of communicating suitable knowledge of the facts and principles, which constitute the subject-matter of research, and of rendering these the means of intellectual exertion, and culture, to the Student.

It has, I am aware, been frequently maintained, that, with regard to the departments now mentioned, a course of examination and exercise is quite unnecessary; because, as the Students of Medicine, Law, and Theology, are commonly of more advanced age than those in the preparatory classes, and prosecute their studies with immediate professional views, they may be supposed to take sufficient interest in the Lectures, to derive from them all the advantages which such a mode of instruction is capable of conferring. This, however, is not a fair statement of the case. A very considerable number of the Students, attending the classes now under consideration, are far from being of mature years; their education, in many instances, has neither been regular, nor complete; their

minds have not been improved; nor have their habits been formed on systematic industry; on which account, they stand very much in want of the direction, and vigilant superintendence, which constitute the discipline of the junior classes. But, granting that they were of an age considerably advanced, there appears no good reason why they should be deprived of the manifold advantages of this practical tuition. It is not meant, indeed, that the same number, or even the same kind, of exercises should be prescribed in the higher classes, that are regularly enjoined by the Professors of Philosophy. It is merely intended that such a mode and course of practical teaching should be adopted, as will best promote the purposes of study, secure attention to the Lectures, and lead the Student to acquire a minute and familiar knowledge of all the subjects brought before him. In whatever circumstances Lectures are delivered for the instruction of youth, the system of Education is eminently defective, if it is not followed up with a regular examination; for, even a class of Philosophers would give more attention to a scientific discourse, did they know that they would be called upon to render an account of it, either in conversation or in writing, by any one vested with authority to demand such a proof of their application.

There is another objection urged against the extension of the practical method of teaching to the higher or professional classes, which, however,

scarcely deserves a serious answer. It is said that Students in such classes ought not to be treated like boys, and subjected to the discipline of a school. Now, it is admitted that the same species of restraint and control is, in them, neither desirable nor expedient; still there is a kind and degree of both, which, if judiciously adapted to the age and pursuits of the Students, cannot fail to be at once reasonable and useful; and I have no hesitation in repeating, with a particular reference to such a case, what I have already stated generally, that, where there are no checks on the part of the Teacher, and no responsibility on the part of the Student, the mode of education does not deserve the name of teaching. What evil, it may well be asked, could possibly arise from the Masters insisting upon knowing whether his pupils actually attend his Lectures?—whether they fully understand them? or whether further instructions might not be necessary? Such precautions would never appear unreasonable to sensible young men, desirous of instruction and improvement. Besides, how absurd and preposterous is it to imagine that a system of education should be constructed to meet the taste and conveniency of those who are to be taught, and who, upon this supposition, must be understood to prescribe the plan upon which they are to receive instruction, and to dictate terms as to the amount of the labour and sacrifices to which they will be pleased to submit. In no other case, where advice or assistance is asked, is it usual to restrict

him, to whom such a request is made, to any one mode of conferring the favour.

Nor can I perceive on what ground the practice of putting questions, and enjoining the composition of Essays, in a class of young men, can be construed as in the least disrespectful to them. If, indeed, this system implied an occasional recourse to the bodily chastisement which, in other parts of the island, is said to be sometimes inflicted on lads of eighteen or nineteen, there might be some reason to complain. But, here, nothing is required which can in the smallest degree mortify the Student, or subject him to reproach or derision. Socrates, the great moral Teacher of ancient times, adopted, for his mode of instruction, the form of question and answer, and, in this way, endeavoured to enlighten the minds of his countrymen, without respect to their age or condition. Why, then, should advanced Students regard this method of improving their knowledge as either disrespectful or undignified, merely because it is employed in the education of their juniors? Are they prepared to give up every thing they do, upon finding that boys do the same? If so, they must not walk, nor run, nor eat, nor receive lessons at all; all these things being practised by the most youthful inmates of a school. Such are the absurdities into which men are doomed to fall, whenever they depart widely from reason and common sense.

There is, moreover, a peculiar inconsistency in neglecting examinations and exercises in the classes of Medicine, Law, and Theology; for, whilst the Students are exempted from all the details of teaching, during their attendance upon the Lectures, they are subjected to a strict examination afterwards, when they become candidates for a degree, or for a professional establishment. Why, then, are they not accustomed to questions during the regular course of education? The neglect of that practice, it is well known, forces the Student at last to submit to a mode of tuition the most discouraging and degrading. The medical Student, in particular, places himself under the charge of one of those Teachers who are vulgarly called *Grinders*, whose business it is to collect the questions which are commonly put by the Examinators, and to drill the candidates upon these interrogations, some time previous to the public examination.

It may be remarked, in passing, that this public examination, in other respects so objectionable, is rendered still more useless by continuing to conduct it in the Latin language. As long as the Lectures were delivered in Latin, there was a good reason for examining the Students in that language; but now, when the Professors, without exception, address their classes in English, and, often, on subjects which were unknown to the Romans, and incapable of being translated into their tongue, the use

of that ancient language, in conducting the public examination, is become highly inexpedient and objectionable. It is, indeed, the most effectual mode that could have been devised, for preventing the Examinator from discovering whatever talents and knowledge the candidate may possess; and, on the other hand, for precluding the latter from availing himself of the information which he may happen to have. Besides, when such examinations take place forty or fifty times in a year, it is impossible but that the questions, which will necessarily assume a kind of form, must reach the Grinders; who, of course, will arrange them, for the benefit of their pupils, under the names of the respective Professors. In one lesson, they will put the questions of Dr. A. in another, those of Dr. B. and thus, in due order, exhaust the Latinity and Science of the whole medical school.

It has been stated, as one reason for continuing these Examinations in Latin, that the Students are thereby induced to pay greater attention to that valuable language. This expectation is founded on a very incorrect view of the subject; for, supposing that the Students have already made proficiency in that field of classical literature, the technical use of it, in medical science, would only tend to corrupt their taste, and destroy the purity of their compositions, whilst, on the supposition that they have not made such proficiency, it may be confidently asserted that

they will never arrive at a competent knowledge of it, by practising under the Grinders. Nor can any good reason be alleged, why Professors of Anatomy, Chemistry, and Physic, should feel it incumbent upon themselves to become Teachers of Latin. But, if so,—if they do imagine it to be a part of their duty to make up for the defects of an imperfect classical education, let them at least set about it in earnest; let them lecture in Latin every day, and examine their pupils as frequently in the same language, and not satisfy themselves with discoursing three or four years in English, and then, once for all, come forward, with more than the learning of Celsus, to puzzle them with questions in a strange tongue. The present practice of lecturing in English, and examining in Latin, manifests about the same degree of wisdom, and acquaintance with the human capacity, as if we were to conduct a stranger through an intricate town, with his eyes open, and insist that he should perform the same circuit, in our presence, with his eyes shut.

To return, however, to our proper subject; I have heard it mentioned, as an obstacle to the extension of the system of teaching now recommended, that the delivery of the Lecture occupies the whole hour allotted to the business of the class, so that no time remains for Examinations and Themes. This reason, however, can only be of weight in the absence of all means of adding

another hour to the daily employment of Master, and Pupil, to be devoted entirely to the exercises just mentioned: even, if a second hour be not sufficient, let a third be appropriated, and the ground of the objection will be removed. The apology now alluded to, so little creditable to the judgment and zeal of those who urge it, is indeed but a branch of that foolish prejudice which makes philosophical education consist wholly in the mere communication of knowledge, and without any reference to the more valuable acquisition of intellectual habits, which enable the Student to acquire knowledge of his own. Nothing, it is presumed, can be more obvious than that, in these days, when scientific publications are so generally diffused, the chief object with a Professor ought not to be the outpouring of his whole stock of knowledge into the minds of his Pupils, but rather the exhibition of a sketch, or outline, of what ought to be known in his particular department, to be filled up by the private studies of the young men, and to be used by them as a guide in their future inquiries. The great point with a Teacher in a philosophical class is to habituate and inure his pupils to think for themselves; to investigate, analyze, compare, and reason consequentially; and these habits are not so likely to be acquired in any other way as by regular examinations, and frequent compositions, on the various subjects which are laid before them. It is of much less consequence to the Students that the Professor shall finish what he is pleased

to call his course, than that he take notice of what they are doing, every evening and every morning; —that he ascertain the extent of their progress, and, above all, their success in acquiring the use of those intellectual instruments by which all real knowledge must be sought for, and obtained. According to these views of utility, it would even be advisable, where an additional hour could not be introduced, to shorten the Lecture, and devote a part of the time to examination. Nor are examples wanting in which this practice has been adopted. Mr. Millar, the late celebrated Professor of Law, in this University, found time to examine the Students, every morning, on the Lecture of the preceding day, before commencing his usual prelections, and, occasionally, also to prescribe subjects for written exercises. It gives me pleasure to subjoin that the present Professor of Law follows, in this respect, the example of his distinguished predecessor.

When speaking on the various duties and obligations of a Professor, it may perhaps be allowed me to remark that, in some circumstances, the Lectures are rendered less useful than they would otherwise be to the Students, by being accommodated to the taste of such individuals as happen to attend for casual instruction, or amusement. It is no easy matter to unite, in the same Lectures, what the scientific Student requires, and what will prove agreeable to him who only seeks to be entertained; in which case the Professor will incur

the hazard of making his prelections too superficial for the one, and too scientific for the other. The ancient Philosophers, for a different reason, had their *esoteric* and their *exoteric* doctrines; and, in the circumstances referred to, this distinction would not, perhaps, be without its use. But this is only mentioned in passing.

I conclude this section with observing, what I believe has been already observed, that the neglect of examinations and exercises by the Professor is a great loss to himself, as well as to his Pupils. He must for ever remain a stranger to the art of Teaching, and content himself with the reputation of a mere public speaker. It is only by experience that he can learn how to accommodate himself to the opening capacity of youth, and how to reconcile their minds to the irksomeness of labour, in following out the more difficult tracks of science. He who has no deeper acquaintance with his Pupils than this, that he delivers to them a Lecture every day, in a room where they are supposed to assemble, will not, at the end even of a long life, be better qualified to discharge the proper duties of a Teacher, than on the day that he entered upon his office. If his class be numerous, and no catalogue called over upon their daily meeting, which is the case in some Universities, he cannot even have the satisfaction of knowing, whether his Pupils favour him with their personal attendance; whilst the mere possession of a ticket will go but a little

way to make good the assiduity, or to aid the progress, of the juvenile Student.

ON THE EXTENSION OF THIS MODE OF TEACHING TO THE STUDY OF THEOLOGY.

According to the existing laws of the Church of Scotland, Students of Divinity enter upon their course, after an attendance of four years in the several classes of Literature and Philosophy; and continue in the prosecution of the various studies connected with Theology during an equal period of time; or, in case of irregular attendance, during the more extended term of six years. The irregular or occasional attendance, now alluded to, is permitted by the Ecclesiastical courts, rather in consideration of the circumstances in which many Theological Students are placed, as tutors in families, or teachers in schools, than from any view to the encouragement of sacred learning: for, as an actual residence of three or four days, once a year, is all that is required of such individuals, it is very obvious that, in pursuing their studies, they are more indebted to their own industry, than to the superintendence of a Professor, or to the wise institution of Divinity Lectures.

Indeed, according to the present mode of conducting Theological study, in the greater number of our Universities, the young men are left very much to themselves, as to the distribution of their time, and the way in which they shall be pleased to employ it. During the long period of four Sessions of College, no examination takes place on the numerous, and very important, topics to which their attention is invited; whilst the few professional discourses which, in compliance with the rules of the Church, are delivered in the Hall, as they may, or may not, be written by those who read them, afford but very unsatisfactory evidence either of talent or industry. In some Universities, personal attendance at the Lecture is almost entirely optional; and, when we consider the age of the Students, the general aversion to intellectual labour which characterizes their time of life, and the many temptations to idleness with which they are constantly surrounded, it will be acknowledged that this relaxed discipline is highly unfavourable to the acquirement of those habits, and of that learning, which are usually deemed essential to the Teacher of religion.

In most of our Halls, too, one hour a day is far from being sufficient to enable the Professor to perform his duty, as it ought to be performed. The necessity of devoting time to hear the discourses which the Church demands of the Students, leaves to the Professor, at an average, only

two hours a-week for Lecturing; and thus puts it completely out of his power to explain, to the satisfaction of the Student, the great leading doctrines of Natural and Revealed Religion. In consequence of this, it frequently happens that the course remains unfinished, after the statutory attendance of the young Divine is over; and I have heard of a Professor of Theology whose course of Lectures did not come to a close sooner than in twenty years.

Why, then, it may be reasonably asked, is the duty of a Theological Professor confined to what can be overtaken in one hour a-day? His appointment is to teach Theology; and the obligation implied in such an office unquestionably demands of him that he shall employ as much time, daily and yearly, as will enable him to teach it in a successful manner. There cannot certainly be any statute, in our academical constitutions, prohibiting the extension of Theological study; and I am warranted in saying that no such obstacle exists in this University. In former times, indeed, as is well known, the Professors of Divinity here did not confine their labours to the short space of one hour, five times a-week; on the contrary, they occupied as much time in Lectures, and other exercises, as the purposes of a good Theological education seemed to require. The celebrated Bishop Burnet, for example, who was, for several years, Professor of Divinity in the University of Glasgow, conducted his class in a manner well deserving of

imitation by all who fill such chairs. In the account of his life, published at Edinburgh, page 243, we have the following detail of his own labours, and those of his Students :—

" On Mondays, he made each of the Students read a head of Divinity in Latin, and prepare such Thesis from it as he was to defend against the rest of his Scholars ; and this exercise concluded with a Latin oration from the Professor.

" On Tuesdays, he gave them a prelection in the same language, wherein he proposed, in the course of eight years, to have gone through a complete course of Divinity.

" On Wednesdays, he read them a Lecture for above an hour, by way of a critical commentary on St. Matthew's Gospel, which he had concluded before he quitted that chair.

" On Thursdays, the exercise was alternate. On Sunday, he expounded an Hebrew Psalm, comparing it with the Septuagint, the Vulgar, and the English version ; and, the next Thursday, he explained some part of the ritual and constitution of the primitive church, making the apostolical canons his text, and reducing every article of practice under the head of one or other of these canons.

"On Fridays, he made each of his Scholars, in course, preach a short sermon upon some text he assigned; and, when it was ended, he observed upon any thing that was defective or amiss, showing how the text ought to be opened and applied. This was the labours of the morning.

"In the evenings, after prayer, he, every day, read them some portion of Scripture, on which he made a short discourse; and, when that was over, he examined into the progress of their several studies, encouraging them to propose their difficulties to him upon the subjects they were reading. This he performed during the whole time the schools were open, thereby answering the duty of a Professor with the assiduity of a school-master; and, in order to acquit himself with credit, he was obliged to study from four to ten in the morning; the rest of the day being either allotted to the use of his Students, or to hear the complaints of the clergy, who, finding he had interest with men in power, were not sparing in their applications."

I have produced this extract, not because I think it contains a perfect model of teaching a Theological class, but simply as exhibiting a complete proof that a Professor's office, in these times, was one of great laboriousness and assiduity. Viewing matters in a very different light from some of those who have succeeded them, the Teachers, of the period now referred to, considered

a constant intercourse with their Pupils as a necessary part of their duty, not imagining themselves degraded by condescending to examine the young men, on what they professed to teach them; to inquire into the progress of their studies; and to prescribe to them a regular series of exercises on the leading subjects of their course. It is, no doubt, some satisfaction to reflect, that the mode of teaching Philosophy here is supported by so high an authority as that of Bishop Burnet; and I should fail in justice to my much respected friend and colleague, the present Professor of Theology in this University, did I not mention that he has already made considerable progress in adapting this method to the study of Divinity, and in restoring the ancient system of activity and emulation by examinations—by Essays prescribed on the Lectures—and by those of a critical nature, on passages of Scripture in the original language.

Into no department, indeed, could the practical mode of teaching be more happily introduced, than into that of Theology. Young men carry with them into that class a fund of knowledge, and habits of study, which must greatly facilitate their inquiries in this new field of research; whilst the subjects on which they are to be engaged are of a nature so highly interesting and important, as effectually to excite their curiosity, and keep up their attention. At this period, too, their minds are less distracted by variety of studies than at

any earlier stage of their progress; and the mere circumstance of their continuing four or five years under the same Teacher, who must thereby become intimately acquainted with their character and talents, and whose opinion of them cannot fail to have a great effect on their prospects in the world, seems, of itself, to hold out many motives to diligence, and to invest the professorial chair with more than common efficiency, for the advancement of study. Why, I beg leave to ask, should the principle of activity be relaxed, and habits of research and assiduity thrown aside, at the very moment that young men are entering upon the studies most closely connected with their future profession? Certainly, if there be any good reason why the Students in the preparatory classes should be subjected to discipline, and inured to exertion, merely to qualify them for prosecuting successfully their several professional pursuits, it must appear more than commonly irrational to allow them, just when their pursuits are to commence, to shake off entirely all the restraints of discipline, and to relinquish all habits of industry. The spirit of diligence, and of scientific research, cannot be arrested in its progress without manifest disadvantage; when it does not advance, it loses ground: when it does not receive fresh life, it dies: and nothing is more likely to hasten this decline than the lazy, deadening, spiritless mode of studying Theology, which prevails too much at present, without application, without object, without regularity, without check,

or responsibility of any kind. Upon what principle is that Professor to be acquitted in the eyes of his constituents, or of the public at large, who confessedly knows nothing, as to the progress and proficiency of his Pupils; knows not whether his Lectures be comprehended by them; what difficulties they have to struggle with; and what misconceptions they may labour under?

On every account, then, it is highly expedient that Professors of Divinity should set apart an hour every day for examinations, and exercises, suited to the circumstances and progress of their Pupils. Besides the knowledge which he conveys to them, on subjects strictly Theological, a Professor of Divinity has much in his power, in the way of recommending attention to accomplishments of a secondary nature,—to eloquent composition, and clear reasoning,—to a chaste and classical oratory, —to a warm, easy, and graceful manner; in a word, to whatever may enable them to reach at once the heart and the understanding of their audience.

It is, indeed, to be regretted, that opinions prevail among a certain class of people, of which the direct tendency is to bring about a species of divorce between the science of Theology, and the human arts, as they are called, of Reasoning and Eloquence. In all situations, however, public men ought to possess public talents; and it should not

be forgotten that, how sacred and important soever the matter may be, which a clergyman has to communicate, it must be conveyed to the minds of the congregation, through the medium of the senses and the imagination. A similar objection was, at one time, entertained by persons of the same narrow views, relative to the use of profane Literature and Philosophy, considered as means of qualifying men for offices in the church. It is not very easy to discover upon what grounds such opinions are founded. At all events, they derive no countenance whatever from the Inspired Writings: for we are not to imagine that the strictures found in the New Testament, on the vain Philosophy of the Greeks, can, in any degree, warrant an attempt to connect Piety with ignorance, and the knowledge of God with a studied neglect for all those sciences which make us acquainted with his works. When the Almighty condescended to remonstrate with his disobedient people, he employed not the voice of Moses, the slow of speech, but that of the more eloquent Aaron. When the disciples were sent forth to preach the Gospel among Jews and Gentiles, the learned and the unlearned, they were commanded to be wise as serpents, as well as harmless as doves: and, when situations of great difficulty and danger were in prospect, an Apostle was chosen of great talents and fortitude, who has exhibited, to all preachers, an example of learned, powerful, and manly eloquence. In all times, has

the Christian orator very formidable enemies to encounter—principalities and powers, spiritual wickedness in high places—and must, therefore, be girt about with the whole Christian armour. He has to combat with ignorance, indifference, infidelity, sophistry, and perverted learning—enemies which require, in him who opposes them, other qualifications besides seriousness and good intention.

But, it is unnecessary to obviate objections which are now very seldom urged, and which, at no time, deserved a serious answer. It is every where admitted that learning and science are indispensable requisites, as the ground-work of a clerical education; and that knowledge of the Scriptures, biblical criticism, oriental literature, ancient history, a clear methodical style of composition, good utterance, and a persuasive manner, ought to be the principal objects of professional study. All this is now taken for granted. The great point, then, is to fix upon a system of means for realizing these important ends: and I know of none more likely to prove efficacious than that which I have ventured to recommend. It is founded on principles analogous to those on which the art of teaching is practised, in every other department of human pursuit and industry; it is sanctioned by the example of some very learned and approved Professors, both of our own and other countries, and, I will add, it is justified

by the experience of nearly half a century, during which it has been acted upon in the Philosophical classes of this ancient College.

ON THE CONDUCT OF STUDY DURING THE VACATION.

THERE is only one Term, each year, in the University of Glasgow; which term continues more than seven months, in certain of the classes, and six months in others; with the interruption of a few occasional holidays. The vacation, therefore, occupies a considerable portion of the Students' time; and it is part of the duty of the Professor to take the charge of the education of his Students, till they enter the succeeding department in the academical course. He cannot, indeed, give his personal presence; but he may be present in the spirit of his instructions, which ought to be of such a kind that the Student may receive some assistance from them, in all his difficulties.

The Student ought not to think that a vacation is a cessation from labour, but a termination only of the public instruction of the Teacher, and of the regular daily business of the Scholar. A vacation, properly and judiciously occupied, far from being an interruption, is, in fact, a necessary part

of a public course of education. The great and general object of all the means of education is to qualify young men for acting their part, in the various situations and conditions into which they may be afterwards thrown. Now, this important end cannot be effected by keeping the Students constantly under the trammels of academical rules and discipline. They ought, occasionally, to be accustomed to voluntary direction in the course of their studies; and opportunities ought to be afforded of putting in practice the instructions they have received, and of confirming the habits in which, it is to be hoped, they have made some progress.

The manner in which public studies are conducted during the Term, render a vacation absolutely necessary. The frequency of Lectures, Examinations, and Themes, and the limited time the Students are allowed for to go through them, render it impossible, during the term, to give, to each part of the business, that full attention and consideration which they require. Many subjects have been explained, in the Lecture, which the Student had not sufficient time to examine, and which must have been imperfectly understood. It must, therefore, be both useful and acceptable to the Student to obtain leisure and tranquillity, for reviewing, in detail, the various doctrines of the Lectures, and for obtaining more satisfactory knowledge in those subjects in which he feels himself deficient.

Before the Student enters upon his vacation studies, there are, however, some previous arrangements to be made. He must consider what portion of time he can afford to devote to his studies; and he must distribute it among them, according to their importance or difficulty. Another thing is essential; viz. that he draw an exact line betwixt the portion of time appropriated to study, and that which is required for relaxation or amusement; for, if the occupations of those two portions of time be allowed to interfere with each other, no regular plan of study can be accomplished.

When these arrangements are once made, they ought to be considered as sacred and inviolable. The time thus appropriated is devoted to the study of knowledge and virtue; and no encroachment ought to be made on it, on any account whatever. Irregular study profiteth little, and is often hurtful. The irregular Student frequently deceives himself with the semblance of study, without the reality. Inconstant, ill-regulated minds are ever changing their occupations, ever making and breaking their resolutions. Thus, trifling every day with themselves, the power of self-determination is weakened, and that power and liberty are lost, which might have led to success and honourable distinction. In such circumstances, the Student never, in fact, overcomes the difficulty of beginning new habits; and never advances to that facility and dexterity of exertion which is rewarded by success.

No habit ought to be more assiduously cultivated by the Student than that of passing quickly from amusement to study, or from one occupation to another. Valuable fragments of time are, for want of this, lost. To put a stop to one train of thought, and immediately to begin a different one, is a most important habit, in the management of business and of study.

When the Student has the full command of his time, during the vacation, he should dedicate the morning to study, in preference to every other part of the day. The morning, it has been said, is a friend to the Muses. Experience has sufficiently shewn that, with the exception of those who have early formed contrary habits, the faculties of the mind, after the repose of the night, are, in general, more vigorously and successfully exerted. But, were there no other reason for selecting the morning for study, it is sufficient that it is less exposed to avocation or interruption. In truth, when the morning is lost, the whole day is in danger; and the loss of one day leads the way to the loss of another. The habit of studying in the morning has also this additional advantage, that the Student may thus carry on the principal parts of his business, upon a visit, as well as at home, without much interruption.

These matters thus adjusted, the Student is directed to consider what ought to be his principal

occupations; the order in which he intends to prosecute them; and the definite portion of time to be allotted to each. The great objects of his studies, during the vacation, are the farther cultivation of the intellectual habits of reading, meditation, and composition. It is not to be understood that any one of these exercises can be well performed without the other—that a person can be said to read without thinking—or that he can think long without composing—but that each of these exercises are, proportionally, to occupy a separate portion of his time.

The Student is directed to begin with a continuation of his classical reading, and to leave no part of this delightful region unexplored. It is now he is to reap the fruit of his early and severe labours, in acquiring a grammatical knowledge of the ancient languages. The utility of classical learning is so universally acknowledged, as a branch of education, that it would be superfluous here to enter upon the discussion of the subject. The study of the classics should form a part of the business of every vacation; and the Student, it is to be supposed, has now the advantage of being able to apply those principles of taste and composition, which he has acquired during the Session, to this part of his vacation studies.

The next department of reading, to which the Student is directed, is that of those Philosophical

authors, who have written upon the subjects of the course. During the Session, the Student is, in a great measure, confined to the hasty consultation of such parts of those works as had an immediate reference to the subjects of those Lectures which required farther explanation. Now, he has time to consult these authors with more composure; and to begin, and continue, a regular study of them, as far as his other occupations will permit. In this way he enlarges his knowledge of the subjects of the Lectures; he examines and compares what he has read, and what he has heard, with the matured knowledge there to be found; and is prepared to alter or confirm the judgments which he had formerly adopted. In such a system of reading, it should be the constant aim of the Student to follow closely his author, his manner of thinking and feeling, and to mark the progressive steps by which he arrives at the conclusions he has formed.

Another portion of time should be devoted to the study of history. The knowledge which any individual can acquire by his own observation and reflection, bears but a small proportion to what he may derive from others. No man can build up his superstructure of knowledge on his own foundation. He must extend his knowledge of human science to the state and phenomena of the human mind, and to the various conditions in which it is placed, in its progress from rudeness to

refinement. Such knowledge of the facts and events of history is the basis of the sciences of morals, politics, jurisprudence, œconomics, and law. Some persons have advised the Student to begin with ancient history; and, after connecting it with modern history, to proceed, in the order of time, to a detail of the latter. Others recommend to him to begin with the history of his own country; and to proceed to that of other countries, in proportion as their connexion with it is gradually developed. But every individual must fix on the plan of reading history most suited to the state of his progress and previous attainments, and to his future objects of pursuit. In general, the reading of political modern histories should be delayed to future vacations, when the Students must be supposed to be farther advanced, and better prepared to comprehend such subjects.

That portion of the time which is appropriated to reading, in the immediate vacation, will be most properly employed with histories, travels, voyages, &c. which treat of nations in an early period of society. Thence may be drawn the elements of the sciences, already mentioned, in their simplest state, before man becomes that complicated, artificial being which he appears in political history. There may be discerned the rudiments of society—the principles in human nature, which dispose the many to be governed by the few—the origin and progress of government, science, and art

—the various forms of delegated power, and their effects upon the talents and the happiness of nations. The perusal of such narratives naturally encourages thought and reflection in youthful and inquisitive minds. To this may be added ancient biographical history, which is full of important information. The Student should also have always at hand some book of elegant amusement, suited to his taste and humour, to which he may apply, at times, when he wishes to unbend his mind, after severer studies.

It is obvious that a small part of this plan of reading can be executed during the ensuing vacation. The prudence and experience of the Student must be consulted, not only in the choice of the books which he proposes to read, but also in fixing those resting places, at which he may interrupt his studies at one time, to return to them at another, with the least disadvantage.

But the attention of the Student is not exclusively directed to the study of authors. He is required to set apart a portion of his time for reflection on the knowledge he has acquired; and the natural materials which occur for this exercise are, the subjects which have been brought under his view in the course of Lectures which has just been concluded. When occupied with hearing these Lectures, accompanied by the daily exercises in which he was engaged, the Student must have marked many

subjects, which he was obliged to pass over without sufficient time for due consideration. Some parts of the Lectures may have been imperfectly understood; and farther light and assistance may be required from the authors who have written on the subjects. There is scarcely an important topic in the Lectures which may not be selected, as a subject of farther meditation. The Student has now time and leisure to make the knowledge he has acquired from others properly his own. He can again bring before his mind the principal subjects of all the different departments of the Lectures, and select those which he thinks afford suitable materials for the exercise of attention and reflection. On some of these subjects, he may employ the process of Analysis, endeavouring to discriminate the qualities of complex objects; on other occasions, he may begin with appearances, or phenomena, and endeavour to trace them through a connected series to their cause; or, beginning with the cause, by a similar process, he may explain the phenomena. He may, at other times, attempt the proof of a proposition, and employ his ingenuity and resources in selecting and applying the arguments, which are suited to the subject; or, by an inductive process, may endeavour to establish general laws, or causes. By these, and similar occupations, diligently and earnestly prosecuted during the vacation, the Student will gradually become habituated to the processes of reflection, reasoning, and investigation, and prepared for their

application to whatever subjects he may find proper or useful.

This reflected review of the Lectures is necessary on another account. The Student, at the beginning of the next Session, is subjected to a strict public examination on the subject of his studies during the preceding year; and nothing can better qualify him for that public appearance, than such a review of the subjects of the Lectures as has been here recommended.

The third portion of the Student's time, in the vacation, should be appropriated to exercises of composition. The Student must never forget that the mere acquisition and possession of knowledge is but the one-half of his work, having a reference merely to the improvement and pleasure of the individual; but, it is only by the habits of communication that he can extend the benefits of this knowledge to others. If the Student has entered into the spirit of his business, during the Term, and has regularly executed the different Themes prescribed, he has only to continue to employ himself in similar exercises, and he must, every day, make farther advances in his habits of composition: for there is no way by which a person can effectually learn to compose well, but by composing frequently. When young persons complain of the difficulty of first compositions, it is because the attempt is made without due preparation. It is an impossible task to

attempt to compose without previous knowledge and reflection, and without some degree of spirit and industry in the attempt. It remains, then, for the Student, with the advantage of the instruction he has received, and the habits he has acquired, to prosecute, under his own direction, the same kinds of exercises in which he has been sometimes formerly engaged. It is needless to specify farther, the nature and kinds of the compositions the Student is now called to execute. There are, in particular, two exercises proposed by the Professor, which he recommends to his Students to execute, during the vacation, viz. one, a subject of argumentation and reasoning, another on taste and criticism. These Essays are to be delivered to the Professor, at the beginning of the following Session, and the committee of examination adjudge prizes to the authors of the best Essays.

One great advantage the Student has, in composing during the vacation, is this; he has full time to subject his specimens to severe and reiterated correction; he can write over and over again, availing himself of repeated amendments, till he has brought his Essay nearer and nearer to the perfection at which he aims. It is impossible to lay down any general rule for composition more useful than to require, at intervals, the subject of the composition to be brought under the review of the writer. Till the Student can submit to the tedious, and often disagreeable, business of frequent corrections,

and numerous copyings, with some degree of patience, his work will not be what it might have been, nor can he ascertain the degree of improvement, in composition, which is within his reach.

> "Vir bonus et prudens, versus reprehendet inertes;
> Culpabit duros; incomtis allinet atrum
> Transverso calamo signum; ambitiosa recidet
> Ornamenta; parum claris lucem dare coget,
> Arguet ambigue dictum; mutanda notabit."

The French critic, Boileau, has advised to put the work even twenty times upon the frame; to polish and repolish continually; sometimes to add; and often to erase.

> "Vingt fois sur le metier remettez votre ouvrage,
> Polissez le sans cesse, et le repolissez,
> Ajoutez quelque fois, et souvent effacez."

The very prospect of such future criticism gives more freedom and indulgence in the moments of first composition, by allowing the writer to follow the natural bent of his thoughts, and to admit the language and expression which the matter suggests, as he knows that he will afterwards have an opportunity of cutting off excrescences and redundancies.

The Professor takes leave of his Students with an affectionate address to them, reminding them of their mutual intercourse and labour, what they

have gained, and what they may lose. With this affectionate farewell, he commits the immediate inspection of their studies, during the vacation, to parents, and those who have the charge of their conduct. Few parents, indeed, are qualified to judge of the proficiency of their children in language and philosophy; and fewer still have leisure or inclination to do so. They can, however, do what may be of much more importance to them, and that without any trouble. When their sons return from College, they may discover, by their conversation, whether or not they have been interested in their studies, and whether they have obtained approbation or censure. They must soon discover, from their conduct, whether they prosecute their studes regularly, when no longer subjected to discipline; whether they readily yield to temptations which take them from their business; and, finally, whether they suffer their amusements to encroach upon the hours set apart for study. When parents are possessed of this knowledge, which is certainly within their reach, they alone are accountable, if they do not make use of that authority, for the benefit of their children, which God and nature has placed in their hands.

ON THE EXTENSION OF THIS METHOD OF TEACHING PHILOSOPHY TO THE UNIVERSITIES OF ENGLAND AND IRELAND.

As the Teachers of Youth, in all seminaries, whether of ancient or modern foundation, profess to have in view the same great end, and are supposed to be at all times ready to direct their endeavours, so as the most effectually to enlarge the knowledge, and to improve the talents, of such as are committed to their care; I feel encouraged to suggest, for the consideration of my fellow-labourers, in other parts of the United Kingdom, a few points on which it seems practicable to amend their system of education, and to accommodate it somewhat more to the spirit of the times in which we live. I am the more readily induced to enter on this step, so apt on many occasions to be deemed invidious, that I have already repeatedly disclaimed all pretensions to the merit of discovery, whether as to the theoretical views, or even as to the method actually pursued for calling these views into action. I profess to have accomplished nothing more than to have adapted, to the higher branches of education, some parts of that practical system of teaching, which is acted upon in the inferior schools; and exemplified, indeed, in every other department of human pursuit, where proficiency depends upon the formation of habits. In imitating, however, the village school-master, the

common craftsman, and the artist, it strikes me that we approach more nearly to the method of instruction dictated by nature; for, as in the case of corporeal habits, so in those that are more strictly mental, facility and excellence are to be acquired in no other way, than by regular and persevering efforts. Viewing the matter, too, on general grounds, when we reflect that the period, at which the principal Universities of Britain were founded, was not distinguished either by general knowledge, or by very just notions relative to the main object of academical education; and, as it is admitted, that, since these times, much valuable light has been thrown upon every other field of human exertion; it is reasonable to expect, that the modes of teaching may, in like manner, be within the reach of a gradual and progressive improvement.

Every one knows that the method of teaching Philosophy which is pursued in the Scottish Colleges, differs considerably from that which has been long acted upon in the Universities of England. In the former, a series of written Lectures, composed or compiled by the Professors, are annually delivered from their respective chairs; whereas, in the latter, the business of education is carried on almost entirely by means of private reading, and a species of colloquial examinations. In the prosecution of this last method, the College Tutor, instead of lecturing, peruses

certain authors along with his Pupils, explaining particular passages as he goes along, and conversing with them on the doctrines or facts to which their attention has been directed. Both plans, no doubt, have their peculiar advantages; but it appears to be easily practicable to combine the best parts of each, without sacrificing any thing essential in either. Could this not be effected, I must acknowledge that I should have no hesitation in preferring the reading system, limited and restricted as it must be, as infinitely more useful than a bare course of Lectures, unaccompanied with examinations and exercises. The leading improvement, then, which I should venture to recommend, is the introduction into the English Colleges of Lectures, properly so called, to be incorporated, to a certain extent, with their present method of teaching by means of reading and conversation. This addition to their system, so far from obstructing or superseding any of their accustomed processes of intellectual culture, would, I am convinced, both render them more efficacious, and, at the same time, more agreeable to the Student. Indeed, the comparatively small number of Pupils, and the full command of their time and arrangements, which is placed in the hands of the College Tutor, are circumstances eminently favourable to a successful application of the method of teaching I have endeavoured to unfold in the foregoing pages.

The greatest obstacle which we have to encounter, in this part of the Island, in following out the details of our plan, by daily examinations, and Themes, arises from our very numerous classes, consisting in some instances of nearly two hundred Students. In a College, therefore, where not more than thirty or forty generally attend the Lectures on Mental Philosophy and Ethics, we have the best reason to conclude that the beneficial effects of the system in question, would be realized to their fullest extent; that each of the young men would be examined every day on the subjects discussed in the Lecture, and that Essays would be regularly prescribed on the principal topics thus previously illustrated and brought home to their comprehension. The age, too, of the Pupils who enter at the English Universities, presents another facility for adopting, in such schools, the Lecture system, as the means of Philosophical instruction. The mind of a youth of seventeen or eighteen is sufficiently mature to follow out a train of reasoning, and to perceive the connexion of a discourse; whereas, in Scotland, there are always a number of Students in the Philosophy classes, who are not qualified, either in respect of age or of previous acquirements, for entering upon such pursuits. In every point of view, then, the method of teaching by Lecture, examination, and the performance of Essays, is fully more suitable to the circumstances of the English

and Irish Universities, than to those of Scotland; and seems calculated, of course, to produce still greater advantages in the former, than have ever yet been actually realized in the latter.

But, I am aware, it may still be proposed as a preliminary question, whether the method of teaching, in present use, does not answer all the purposes of education, as well as that which is here recommended: Whether a careful perusal of select authors, and a subsequent conversation upon them, between the Tutor and his Pupils, are not employments as likely to improve the minds of youth, as a formal Lecture pronounced in their hearing, even when it is made the ground-work of examination, and converted into materials for exercises in composition. To decide this important point, it will be previously necessary to come to an understanding as to what are, or ought to be, the main purposes of education; and I should imagine, there will be no difficulty in admitting that these are all comprehended, *first*, in the communication of knowledge; and, *secondly*, in the cultivation of the mental powers, without a reference to any specific acquirement, whether in literature or science.

With regard to the communication of knowledge, there can be no doubt that, as far as classical learning, mathematics, and the higher parts of arithmetic are considered, the only rational

method of conveying instruction is to peruse, with the Pupil, the best works in these several departments. No man ever thought of teaching a boy to understand Homer, Euclid, or La Place, by means of Lectures. But, we are now speaking of philosophical education, as it relates to the science of mind, of morals, and of human life; the principles of reasoning and of taste; the distinction of good and evil, of justice, of law and of government; and, certainly, in this wide field, where opinions have so long remained unsettled, and where no authority is permitted to give a final decision, a very different mode of instruction ought to be pursued. It is here, in short, that the lecture system ought to be introduced, as supplementary to that of individual reading.

For instance, it is only necessary to observe that no one writer contains all that the Student ought to know, and that every writer comprehends more than it is either requisite or expedient should be laid before him. Our greatest authors, it is well known, wrote, not for beginners, nor with the view of giving a didactic system, but for the learned world at large, and commonly, too, with the intention either of attacking or supporting some particular hypothesis. It is impossible, therefore, to find, in any single work, the elementary statements, combined with the general views, on which a philosophical education should be constructed: and thus it necessarily becomes the office of a

Teacher to read, to select, and to arrange, for the use of his Pupils; and, from the copious stores of knowledge with which his professional studies have furnished him, to bring forward what shall appear best suited to their previous attainments, as well as to the particular object of his Course. In drawing up his Lectures, in such circumstances, the Professor will frequently see it expedient to confine himself to the outlines of subjects, which may be treated by the original author in great detail: he will give, at some length, the history of opinion, on the more important questions which present themselves for discussion: he will call the attention of his Pupils to the various stages in the progress of the human mind, from its first attempt at generalization to the accomplishment of a connected system: and, in particular, he will point out the numerous sources of error, whether arising from the nature of certain inquiries, or from the imperfection of human reason, which have at various times materially retarded the advancement of science. Indeed, in many subjects of study, such as divinity, law, ethics, and politics, the history of opinion constitutes the sum and substance of our knowledge. Our inquiry, therein, after the statement of a few first principles, is directed to little more than the succession of truth and error, to the varying forms which they may have assumed, and to the circumstances which paved the way for their alternate reception. It must then be abundantly

evident, that the perusal of no one work, in these departments, nor, indeed, of all the works, at any one period, would be sufficient for the purposes of instruction.

If, indeed, we shall be allowed to suppose, that the object of the Tutor and his Pupil is confined to the very limited attainment of knowing what were the opinions of an individual Author; of Aristotle, for example, of Bacon, of Locke, or of Reid, on any particular point of Philosophy, the plan of education at present pursued is unquestionably the best that could be imagined to gratify their ambition; for, they have only to turn up the chapter and section of the particular work, to examine the argument, and to note down the conclusion. But if, on the other hand, their views extend to the more exalted object of inquiring what are now received as the general opinions, on the various subjects handled so successfully by Aristotle, Bacon, Locke, and Reid, in their respective works—what were the notions which prevailed as to the object of Philosophy, and the principles of human knowledge, in the long interval between the first and the last of these distinguished writers—what were the discoveries or modes of thinking which led to the several changes of doctrine on these points, as we find them recorded in the history of science, and upon what particular grounds every succeeding theory was ultimately maintained or

rejected, it is manifest that all the reading which the Pupil, directed by his Tutor, could possibly overtake, during the whole time allotted for College residence, would not enable him to accomplish this end. In short, the reading system of instruction can only be recommended, when the Teacher wishes to convey to his Students the views of some individual Philosopher; and, as such a limited undertaking is altogether inconsistent with the present state of science, it follows, that, in order to realize the first mentioned purpose of academical education, namely, the communication of knowledge, the Tutor ought to draw up, from his own stores of information, a course of Lectures for the use of his Pupils; containing at once an outline which they should endeavour to fill up, and a guide to the best source of materials.

Let us apply these general observations to the actual practice of the Schools where the reading plan of teaching Philosophy is adopted. The books usually read in the Colleges alluded to, as an introduction to the philosophy of mind, are, I believe, Aristotle's Analytics, or an abridgment of them in the Latin tongue, Locke on the Human Understanding, Reid's Essays, Stewart's Elements, and one or two other works written on the same subjects, and with the same views. Now, it cannot fail to strike every person acquainted with the character of the publications just specified, that, in many respects, they are quite unsuitable for the

purpose of elementary instruction; particularly, as they contain, even in the first parts of them, much of abstraction, generalization, and deep reasoning, entirely beyond the comprehension of the youthful mind. I pass over the Analytics, which are now generally considered as altogether unfit to be used as an introduction to the study of Philosophy. But even the Essay of Mr. Locke is little better calculated for the commencement of a Philosophical course. He begins with a very argumentative dissertation on the doctrine of innate ideas, and goes on to explain our notions of power, time, space, infinity, which are some of the most abstract conceptions of the human mind. Dr. Reid, again, in his Essays on the Intellectual Powers, after some very judicious observations on the method of studying mind, proceeds almost immediately to certain hypotheses on the nerves and brain, the phenomena of external objects, and the doctrine of ideas illustrated by the theories of Berkley, Leibnitz, and Hume. The work of Mr. Stewart, too, although entitled Elements of Philosophy, can be considered as elements to those only who have already made considerable progress in the study of mind. It requires only to run over the contents of the first part of his first volume, to be satisfied of this fact. The general and enlightened views which he gives on education, on the art of reasoning, and on theories of perception, cannot be fully comprehended by those to whom the very term Philosophy has

never been explained, and who are of course completely in the dark as to the precise object of all their inquiries.

It cannot be necessary to remark, I should hope, that these strictures have no reference whatever to the general merits of the works now mentioned, all of which have so materially extended the bounds of science, and done so much honour to their respective authors. Nothing more is meant, than that from the subjects which are discussed in them, and the abstract manner in which they are composed, they are not at all suited, as school-books, to the habits and acquirements of those entering on their first course of Philosophy.

But, supposing that the works of an individual philosopher, Mr. Locke or Dr. Reid, for instance, were completely calculated for the uses of a College Lesson; that the matter, the arrangement, and the mode of writing, were, in all respects, suitable to the capacity of beginners, it is clear that Pupils taught in this way, would only become acquainted with the opinions of one man, and with the state of Philosophy at the particular period when he wrote. With respect, then, to the acquisition of knowledge as connected with the history of opinion on the subject of mind, of reasoning, of morals, the method of teaching pursued in the English Colleges would, in my

estimation, be greatly improved by introducing the practice of Lecturing, in the Scottish acceptation of the word.

The communication of knowledge is not, however, on any account the principal object which ought to be kept in view, in constructing a system of academical education. However important the knowledge received from particular authors may be, and whatever improvements may be made in the modes of communicating it by more strict and minute examinations, by collections or otherwise, it must be observed, that these exercises embrace chiefly the means, but not the ultimate end of education. They, indeed, tend to improve the powers of comprehension and memory; but they are not calculated to bestow that vigour, activity, and penetration, by which Students acquire knowledge of their own; by which they generate new trains of thinking, and habits of weighing and estimating the grounds of their judgments; and of combining and expressing the knowledge which has been acquired. In all these respects, the Lecturing system appears superior to that with which we are now comparing it. While listening to a discourse delivered with some degree of animation, the mind of the Student is necessarily more awakened, and feels a more powerful demand made upon its energies, than when perusing a printed volume; for, in the latter

case, he is quite aware that inattention can be made up for by a second reading, and that every fit of absence may be fully compensated by a little voluntary exertion, when he is more disposed to be studious. The Pupil, on the contrary, who hears a Lecture pronounced from the chair, and who knows he is to be examined on the subject of that Lecture, its principal topics, its arrangement and illustrations, and to be required to write an exercise on some part of it, composed, too, upon the materials with which he has been thereby supplied, is naturally actuated by every motive which can stimulate industry, and sustain attention. The memory is employed to store up the facts and reasonings brought forward by the Lecturer; the judgment is exercised in discovering their connexion and dependance; and the powers of reasoning are called into action, while he draws conclusions, and generalizes his inferences. Compared with these efforts of mind, the mere reading of a volume in private is a dull and uninteresting employment. The intellectual powers are never sufficiently roused; they are in a state approaching to passivity, being never stretched to their full tension, nor made to put forth all their strength. The young man, in short, is not induced by the mode of his pursuits to bring his energies into play; he is not permitted to know the extent of his talents, nor the amount of his endowments. He merely endeavours to deposit in his recollection a number of statements, and a few general arguments,

without having had to strain the faculty of reminiscence in gathering them together, or to task his judgment with the discovery of their relations. In a class-room, on the other hand, emulation and energy are found to result from the simple circumstance, that a number of young persons similarly situated as to age and advantages, are engaged in listening to the same things, and in receiving the same impressions. A sympathetic animation pervades the whole; the glow of zeal, and an expression of curiosity are perceived in almost every countenance; all the faculties of the mind are exerted, and powers unused before, are awakened into life and activity.

The *viva voce* examination, too, would be attended with the best effects in an English College. The age of the Pupils, their previous acquirements as classical scholars, and the convenient number in which they assemble, are, as has been already mentioned, circumstances favourable to a successful application of the method now recommended. Such examinations are obviously a much better test of ability, and afford, at the same time, a much more efficient means of improvement, than a conversation, or even a series of questions, on the works of any writer, however eminent. For, in the latter case, the Pupil will be apt to give his answer in the words of his author, without, perhaps, clearly understanding the terms of which he makes use; whereas, in an

examination on a Lecture, to which he had listened in the company of others, he is compelled to exercise at once his judgment, and his memory, and to express his meaning in language of his own composition. We may take an example from another department of mental exertion, the office of a Reporter in the House of Commons, and compare the effects produced on the faculties of memory, arrangement and expression, by the constant exercise of these powers in the details of such a duty, with those which would arise from the mere reading of a speech in the newspapers, even although he who reads were required to give some account of it, when he had finished the perusal. This is exactly a case in point. The Student who listens to an academical Lecture, under the impression that he is to be examined upon it, and to give the substance of it in an essay, is in the situation of the Reporter in the House of Commons; and the Student who reads a book in his apartment, in the view of conversing upon it with his Tutor, resembles the mere reader of a speech in a newspaper; and it will be found, upon a candid inquiry, that the effects of the two systems of education, here indirectly compared, will be analogous to those connected with the two exercises now described. Every one knows, how astonishingly successful many Reporters are, both in the Houses of Parliament, and in the Courts of Justice, in giving the principal topics, as well as the leading points of illustration, of a long speech; and, it is too

obvious to require remark, that this command of the several faculties of memory, discrimination, and arrangement, arises from a species of mental exercise, in many respects similar to that which is followed out in the first class of Philosophy at Glasgow, and which I am satisfied, might easily be introduced, under certain modifications, into other academical establishments.

With regard, in the next place, to the writing of Essays on the subjects discussed in the Lectures, it cannot fail to be considered as a most fruitful source of improvement, and eminently suited to the circumstances of English Colleges. I am perfectly aware, that Essays are prescribed at present in the Universities of England, and in that of Ireland; but, as I have already remarked, they are usually confined to subjects quite unsuitable for very young Students, and frequently so restricted, indeed, as to exclude under-graduates altogether from competition. The great use of this kind of exercise must arise from the skill with which it is adapted, not only to the acquirements and previous habits of the Pupil, in the outset of his Philosophical studies, but especially to his progress in knowledge and maturity of talent, according as these shall happen to be manifested, at every subsequent stage of his advancement. At first, the subject prescribed ought to be simple, and, at the same time, susceptible of copious illustration. The Essay itself ought not to be long, and the

Pupil should even be directed, in his earlier efforts, how to distribute his materials, and to connect his paragraphs. In these acts of attention and assistance, we discover the judgment and usefulness of the Teacher; and in prosecuting the plan of essay-writing, to the extent to which it might easily be carried within the walls even of the largest of the English Colleges, a thousand occasions would present themselves to the intelligent Tutor, for giving a greater degree of efficiency to our mode of teaching, than we ourselves have ever been able to attain. The improvement of the Students in philosophy, taste, and composition, would be promoted at once, and by the same means. Their natural abilities would receive regular and appropriate culture; and, what is more valuable than all these advantages put together, the young men, taught in this way, would acquire a force, and ready use, of all their intellectual faculties; and would be qualified for higher pursuits in the paths of science, or for engaging successfully in the business of active life. The object of the Teacher who follows this practical method, as I have already repeatedly observed, is not so much to convey knowledge, as to put in the hands of his Pupils an instrument for acquiring it by their own exertions; not so much to give them an abstract view of mind, in general, as to make them thoroughly acquainted, from experience and reflection, with all its powers and modes of operation, in the acts of perceiving, remembering, forming judgments,

conducting a process of reasoning, and generalizing particular inferences. He undertakes not to confer upon them the riches of learning to any given amount, or of any specified description; but rather such a degree of improvement, and such a ready use of their intellectual powers, as like the philosopher's stone, will convert into gold every thing to which they are applied. In the outset of the course, accordingly, he regards knowledge as valuable to youth, on hardly any other account than as it constitutes the materials of thinking, and the means of carrying on a practical system of instruction; convinced that, if he succeed in training his Students to reason, to inquire, to arrange their thoughts clearly, and to clothe them with ease in a suitable form of expression, the principal end of an academical education will assuredly be attained.

It is not to be inferred, from any thing now stated, that the judicious perusal of select authors, even during the course of the Session, ought to be altogether disregarded. On the contrary, the Lecture-system when properly conducted, by frequent reference to works connected with the several subjects discussed, necessarily leads to the perusal of a variety of publications; and the only danger attending it, is, that the reading of the Students may become desultory and promiscuous, and consequently unprofitable. To prevent this, I usually specify such parts of every work as ought

to be read in the meantime, being those, of course, that are most nearly allied to the business in hand; requesting the young men to postpone the farther examination of its contents till the ensuing vacation, when they will have more leisure to profit by such studies. During the term, there is no time for extensive reading, the attention of the Students being chiefly taken up with exercises which they have to write, and with preparing for the daily examination. The Lectures, indeed, so far from precluding the advantage of private study, are meant to afford directions for reading: while the practice of essay-writing carries with it, to the Student, a very strong inducement to consult authors, both in order to obtain materials, and to ascertain the justness of his own conclusions. The great object, however, at this stage of his progress, is the improvement of his faculties, to which mere reading is supposed to contribute but in a subordinate degree, and is therefore not made the principal part of his occupation.

In justice, however, to a system, of which I have not hesitated to point out what appears to me the defects, I will add, that the plan of education by means of books, conversation, and abridgments, is infinitely superior to the Lecture method, when not accompanied with regular examinations, and a systematic, progressive course of Themes. Of the latter mode of conducting philosophical education, if education it ought to be called, I am

unwilling to speak in terms which its gross absurdity suggests to my mind. But it is not to this very imperfect method that I now direct the attention of the reader; and, while indulging in a few remarks on the plan pursued in the English and Irish Colleges, I may be permitted still farther to observe, that, in the subjects selected by the Tutors, there seems to be, in some instances, at least, a total neglect of mental Philosophy, and of that natural logic which is founded upon the knowledge of our intellectual powers. In one College, classical literature is almost the sole study; in another, mathematics, and the higher parts of algebra, engross all the attention; but in scarcely any, do we find a regular process of intellectual culture going on, conducted with a reference to the natural order of the human faculties, their growth, their progress and maturity. It is, therefore, with the view of supplying some defects, and correcting some errors, as upon the most candid construction they appear to me, in several of our Academical Institutions, that I have brought forward, into public notice, the plan of teaching the first Philosophy Class in this University, now firmly established from a conviction of its usefulness.

To give full effect, however, to this method of teaching Philosophy, the office of Tutor, in the several Colleges, ought to be permanent. Such an arrangement seems absolutely essential to

proficiency and success, in the art of teaching; for this art, like all others, being founded on practice and observation, must derive, from that quarter, all the improvement of which it is susceptible. Upon the erroneous supposition, that the art of teaching consists in the mere communication of knowledge, it has been inferred, that wherever a person has acquired a certain portion of science, or literature, he is immediately qualified to instruct others. But knowledge and intellect are not the only qualifications of a teacher, nor even the most important. On the contrary, it is sufficiently confirmed by experience, that the most profound scientific attainments, the finest imagination, and the most exquisite taste, do not, of themselves, qualify their possessor for becoming a discriminating or useful Teacher. The knowledge which will most avail him, in aiding the endeavours of youth, is that which is drawn from a strict attention to the development of the intellectual powers and habits, and from a close and continued intercourse with his Pupils, in all their efforts, in their success, and in their failure. A Teacher, no doubt, when he enters upon his office, must gain experience at the cost of his Students, on the same principle that a young Physician improves in skill, at the hazard of his patients; but in Colleges, where the Tutors have their eyes fixed on senior fellowships, or a church-living, from the moment they enter upon their duty, it is impossible that much progress can be made by them in

the difficult art of teaching. In this way, there is a constant and rapid succession of inexperienced Tutors thrown into the only active department of the Colleges; and education, viewed in reference to its most important objects, never can rise above a state of infancy. The Tutors relinquish their office, just when they are becoming qualified to fill it. The appointment, indeed, according to the notions prevalent in such places, is at no time considered of high estimation; it may be filled by any one who has been elected to a fellowship, and it is abandoned by all, whenever an opportunity offers. In such circumstances, then, we may safely infer there can be nothing of that ardour and enthusiasm so necessary to carry a Teacher through the drudgery of his professional duties. There can be no such thing as an art of education. The old and the experienced quit the helm, and the vessel is left to the direction of those who have scarcely made one voyage. In every other art, it would be thought singular indeed, if those who were appointed to teach it were persons who, from their age or practice, had the fewest opportunities, and the most confined experience, who were to continue in that office only a very short time, who consider it merely as a temporary employment, and who, moreover, during that short time, so far from having a sufficient inducement to exert their talents to the utmost of their power, would have their minds fixed on a better situation, soon to be enjoyed by

them, not as the reward of services, but as the mere contingent of seniority. If this would be thought absurd in every other department of life, why is an exception to be made in the case of one of the most difficult, and, certainly, not the least important, of all arts—the art of teaching.

It is to no purpose to urge, in support of the present system of appointing Tutors, that many of them have distinguished themselves by great ability and success in the discharge of their office. It would be wonderful indeed, if, among such a number as exercise that duty, and amid such a variety of genius and taste as must occasionally adorn it, there should not be found some individuals possessed of the proper qualifications; who are seen to take pleasure in communicating knowledge to youth, and in being instrumental in their progress; who do not allow their minds to be alienated from their office by future prospects; and who find, in the consciousness of discharging a weighty obligation, a motive sufficient to support the exhausting labours with which it is attended. Such instances, however, are not to be attributed to the spirit of the system. They are rather to be viewed in the light of exceptions, and as exhibiting, in strong colours, the manifold advantages which would result from a mode of appointment, calculated to secure all the talent and the zeal of the Teacher, for the furtherance of education. The lower

seminaries all over the country, are provided with Masters on a better principle, than the Colleges, in either of the English Universities. They are filled by men who make education their profession; and who, having their eyes fixed on nothing beyond it, devote all their time to its details, and all their talents to its improvement.

I am not ignorant that another argument, if such it should be called, has been repeatedly employed, in support of the general plan of instruction pursued in the English Universities. It has been maintained, that, with all their defects, these Institutions have sent out into the world more great men—a larger number of persons distinguished in the different walks of science and literature, as well as in all the pursuits of public life—than almost any other establishment of the same kind. The views upon which this argument is founded are extremely fallacious, and prove rather, that native genius cannot be depressed by defective systems of education, than that eminent talent, or even great acquirements, are to be attributed to any mode of teaching. The greatest men whom the world has produced, have owed but a very slight obligation to the care or skill of masters; and, when we peruse the biography of Milton, Locke, Newton, and Johnson, we are at a loss to discover upon what other ground, than that their names were entered in a College record, any merit has been taken by the seminaries wherein

they happened to keep their terms. Is it imagined, that if men of genius were to give the history of the various steps of their secret studies, and the accidental helps by which they gradually attained celebrity, they would have much to ascribe to the forms, and lessons, and commentaries, of a College Tutor? It were to be wished, indeed, in order to place this mode of reasoning on its proper foundation, that we had a list of the thousands who might have been scholars and men of science, if they had been suitably instructed; for, it is worthy of remark, that the merit of academical institutions is to be estimated, not by the few men of uncommon talents who have been there educated, but by their success in cultivating ordinary ability; in raising the lowest mental endowments to that degree of eminence which nature has placed within their reach; and, above all, by the tendency which they have to confirm habits of industry and a love of research. In short, we must not draw our conclusions in this field of inquiry from particular instances; and we have it not, in general, in our power to found them upon a comparative estimate of what is actually performed; because we cannot determine how much is due in every single case to natural gifts, how much is to be ascribed to individual exertion, and, of course, how much belongs to the Teacher and to the system of the school. We must, therefore, form our opinion on the subject on principles connected with general experience relative to

the human faculties, and the most natural method of culture; on the analogy of nature in the development of our mental energies; and on the practice of those who have been most successful in instructing the young, whether in action, fact, or principle. To this criterion I am willing to submit the propriety of whatever I have advanced, either in the way of stricture, or of suggestion.

I am not inclined to flatter myself with the expectation that any material change, in the system now alluded to, will be adopted, in consequence of any recommendation which is contained in these pages. But every person deeply interested in the success of education is entitled to expect that whatever is candidly proposed, as an improvement in the plan of conducting it, should receive, at least, an impartial consideration. Nor is there any thing, I should hope, in the constitution of Colleges in the South, positively to preclude all changes whatsoever, in the mode of applying the industry and genius of their Students; for a statute to this effect would be tantamount to a determination, not to admit any of the improvements which the progress of science may bring to light, how essential soever to the furtherance of the object for which they were originally founded. Every change which is calculated to improve philosophical education must be in perfect accordance with the spirit and intent even

of the most ancient of such establishments; and it is always to be presumed, that, if the founders had possessed the knowledge and experience which has elsewhere led to any particular innovation, they would have been the first to adopt it. For instance, the statutes left in force, at the last visitation of the University of Glasgow, required that the Professor of the First Class of Philosophy should teach Aristotle's logic, and those parts of his metaphysics which treat of ontology and the human mind. But the present Professor does not think that, by any change of subject which he has introduced, he has deviated in the smallest degree from the spirit of these statutes; and his immediate superiors, accordingly, have sanctioned the modifications which he has thought it expedient to make, whether in the subject-matter of his Lectures, or in the details of teaching. This is nothing more than that accommodation to circumstances which the imperfect nature of all human institutions is found to demand. Laws become obsolete from the change of manners and opinions; and, although permitted to remain on the statute-book, have no more force than if they had never been in existence. So should all enactments which restrict education fall into desuetude whenever they are found to oppose the advancement of sound views, and of useful knowledge. And were the plan of teaching Philosophy, which is here recommended, to be adopted in our Universities, the reproach which is so often thrown out against

them, of not teaching any thing connected with the business of active life would, in a great measure, be removed.

But I fear not so much the opposition which arises from statutes and the caprice of founders, as that generated by prejudices which spring up in learned societies, and are, in some degree, fostered by the habits and modes of life which there prevail. The magnificence and splendour of ancient establishments, with the power and privileges with which they are endowed, have contributed to separate them, in some very important respects, from almost every other learned society, and to create a feeling of superiority, which does not easily brook any change in their habits and institutions. It is to this constitutional pride and importance that I allude, when I anticipate opposition from the habits of thinking which prevail among some of those classes of men to whom these observations are addressed; for nothing is likely to be so ill received by them as an allusion to supposed defects and imperfections, except, perhaps, a comparison of their system with that of similar establishments.

It is not my object here to moralize on human weakness, nor to remonstrate with human folly; but, certainly, neither great age nor great wealth ought to be made the ground on which to raise a claim of superior excellence for a public seminary

of education. Antiquity, be it remembered, is the infancy of society; and riches, in this case, as in all others, reflect honour on their possessor, only in proportion to the wisdom with which they are employed. Besides, the revenue of a College ought to be viewed in the light of wages, and not in that of an unconditional donation. It originally sprang from the piety or liberality of individuals who wished to promote the education of youth; on which account, it becomes the bounden duty of the members of Colleges, to provide, with the utmost assiduity, that the means afforded for the instruction of the young persons committed to their care, shall not only be such as they have hitherto been, but the best that the improved state of information, in modern times, can possibly supply. It continues, however, to be a reproach on some learned societies, that a prejudice in favour of certain modes of teaching is apt to become so powerful, as to withstand every effort to improve them; and that, while every other order of professional men are disposed not only to borrow but to steal improvements from one another, Teachers in Universities avoid all communication and intercourse, think it beneath them to take a hint which might prove useful, or to profit by the experience of those who may have ventured out of the common track. Such conduct is neither wise nor liberal. Engaged in the same dignified and important work, upon which the great interests of society so much

depend, it ought to be the common duty of every public Teacher to exert himself to the utmost, whether by adopting new methods, or by improving upon the old, to raise higher and higher the intellectual and moral character of the human being. But I forbear from insisting upon matters so obvious and common-place. No man doubts that it is incumbent on him to do his duty in the best way that it can be performed. The only difference of opinion is respecting the means; and, to come to a right judgment on this head, nothing more seems necessary than candid inquiry and a fair comparison. In this, as in all other questions as to right and wrong, better and worse, the power of truth is great, and must ultimately prevail.

CONCLUSION.

In taking a review of the foregoing pages, I am anxious to discover whether I have sufficiently expressed what was meant to be stated relative to the beneficial effects of a system of philosophical education, calculated to improve the reason of Youth, and to give them a turn for reflection and inquiry. The advantages of such discipline, it is abundantly evident, must have the effect of strengthening and invigorating the faculty of rea-

son, and of preparing it, not only as an instrument of science and literature, but for its higher office of forming rules of duty and of conduct. The daily necessity which this mode of instruction imposes upon Students, of acquiring distinct notions, of attending to the grounds and evidence of their judgments, of arranging their thoughts in order, of pursuing, by analysis and induction, the links which constitute a chain of reasoning, and of expressing their ideas with perspicuity and propriety, must have the effect of producing habits of thought, deliberation, foresight, and decision, in the mind. It is such a plan, or one similar to it, which Philosophers, Politicians, and all men of reflection, have had in view, when they have maintained that a good education is the most solid foundation of the happiness and prosperity of individuals and of nations. But, to effect this great end, education must comprehend something more than classical literature, the knowledge of ancient or modern systems of philosophy, or of the properties or relations of figures. It must touch the springs of feeling and of action, and contribute to the formation of intellectual and moral habits. Did all the Universities and Seminaries of a nation send forth annually their hundreds and thousands, thus prepared for speculation, or for action, who, by their example, their instruction, and their influence, might produce great effects upon the opinions and conduct of others, the effect upon the general mass of human society would, I am persuaded, become

far from imperceptible. When it is farther considered that a great share of the misfortunes, disappointments, and miseries of human life, have their origin in ignorance or indolence, in rashness or indecision, in incapacity or feebleness of exertion; such a plan of education, improved as it might be, by experience and talents, must greatly tend to fortify the minds of Youth against the evils with which they might be assailed in their journey through life.

Another object which has been present to my mind, during the execution of these outlines, and has, I hope, been in some measure realized, was to lay down a more definite notion of what is meant by what is generally called a philosophical education. At present it means every thing, and imports nothing. At one place, it is the knowledge of Aristotle's logic and metaphysics; at another, it is the study of geometry; at a third, it is confined to the reading of certain books of Philosophy, with examinations on them; at a fourth, to a course of Lectures delivered from the chair of a Professor, without either examinations or exercises; while, at a fifth, it comprehends a portion of all the occupations now mentioned, employed generally as the means of improving the powers of acquiring knowledge, and of creating intellectual habits. What I should wish, then, above all things, to impress upon the Teachers of Youth, is to keep before their eyes a definite object, to be realized in due time by

their own exertions co-operating with those of their Pupils; and, in this way, affording a standard for estimating the progress which may be made, and the work which still remains to be achieved. For in such circumstances, it will be impossible to refrain from occasionally asking themselves, whether the labour they perform, and that which they require from their Students, are at all likely to accomplish the end which they have in view?

It appears also, in the third place, that, whatever improvements are made on practical education in our Universities, must begin with the Teachers themselves, and not with constitutional innovations, or with new foundations. The art of education, like other arts, is built upon experience and observation. Improvements are not to be expected from legislators, or politicians, who have many other objects which press upon their attention; nor even from Philosophers, unless they have drawn their knowledge from the above source. It is the indispensable duty, therefore, of every one engaged in teaching Philosophy, to collect facts, to record observations, to watch the progress of the unfolding of the human faculties, to begin the work of reformation with trials or experiments; and thus to unite their efforts in contributing to the general improvement of human reason.

Lastly, it is comfortable to think that all the improvements of which philosophical education is

susceptible may be brought about without imposing any new burdens on society, and merely by adding a little to the labour, and introducing a few modifications into the systems, of those to whom the department of education is now entrusted. Were any farther arrangement of a pecuniary nature requisite, the public, I am persuaded, would not withhold it. But the funds, under the management of the greatest part of our Colleges, were they judiciously appropriated, would be found sufficient for all the purposes of a good education. In the most opulent seminaries, indeed, a full provision is made, not only for the support of permanent Tutors, were they established on such a footing, but also for the retirement of men of science. This remark, however, applies not to the Universities of Scotland, where the emoluments of the Teacher are generally so scanty, that the Patrons of some of our Colleges have been obliged to resort to the hurtful expedient of uniting Professorships with church livings, at the hazard of sacrificing, to a certain extent, the interests of both. Nor is any provision secured for the support of aged Teachers, when they are no longer able to discharge the fatiguing duties of their office. The Professors in Scotland must continue to teach as long as their health will permit; and when they are no longer equal to the drudgery, they must submit to a diminution of their income, by paying those who supply their place. The arrangement by which judges of a certain

standing are allowed to retire on their salaries, has been very generally approved; and it has often occurred to me, that a small part of the hereditary revenue of this country could not be better applied than in granting an allowance to *emeriti* Professors. It is not likely, that at any time there would be many on the pension list; for, in the course of years, the power of custom becomes so strong, and the taste for teaching is generally so much confirmed, that Professors find it their pleasure, as well as their interest, to do the duty of their office as long as they are able.

This suggestion proceeds from no selfish motive; for before such an arrangement could take effect, it is probable, that the author of these remarks, after nearly fifty years service in the cause of education, shall have finished his course, and have his dependence upon rewards of a different nature.

THE END.

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